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National Safety Congress Arouses Enthusiasm

Eight Thousand Delegates From Far and Near Attend Annual Convention Held Last Week In Five Leading New York Hotels—Trophies Awarded to Winners of Annual Paper Mill Safety Contest—Group Safety Supervisors Discuss Important Problems—Kenneth L. Faist Heads Paper and Pulp Section

Approximately eight thousand delegates mobilized in five hotels in New York City last week to further a crusade that has for its object the saving of human life. These delegates to the Seventeenth Annual Safety Congress of the National Safety Congress resolved that the current year would not witness a repetition of the sacrifice of 95,000 lives in preventable accidents last year. The congress decided upon a country-wide conservation campaign which would touch every town, village and hamlet in the land with the program of caution.

The delegates were from every section of the country, with some from Canada and Europe. They were managers, technicians, safety engineers, labor leaders, architects, builders, educators, physicians and public officials. They represented scores of industries. The lobbies and meeting rooms of the Waldorf, the Pennsylvania, McAlpin, Martinique and Commodore were jammed with the visitors and their wives.

Group Plant Safety Supervisors Session

The Group Plant Safety Supervisors Session was held on Tuesday afternoon, October 2, at the Hotel Pennsylvania, when H. W. Hoyman, staff superintendent of service, of the Kimberly-Clark Corporation, Neenah, Wis., opened the proceedings with an interesting address on "How We Keep Safety at Work in Our Distant Plants." Mr. Hoyman described some of the safety methods which seemed to work particularly well at the distant plants of the Kimberly-Clark Corporation and generalized upon the experience gained. He stressed the importance of securing the intelligent cooperation of the foremen of the various plants.

John Lundrigan Gives Instructive Talk

John Lundrigan, industrial superintendent of the International Paper Company, New York, gave an instructive talk on "What Should Be the Status of the Group Plant Safety Engineer?" He reproduced practically verbatim regulations under which his organization operates this part of its business. Mr. Lundrigan declared that in the case of the local plant or individual unit, the general policy of his company is to consider the plant manager as the International Paper Company in his jurisdiction, subject, of course, to rules, orders and practice laid down by the general management, so that the authority and responsibility of the plant safety supervisor as being the direct representative of the plant manager in carrying on this work at the plant can be located. So far as his relations to other department heads of the plant are concerned, he is rated neither above or below any of them. In the judgment of the International Paper Company the two features that must be entirely divorced from his work are dictation on the one hand and subordination on the other.

Paper and Pulp Section Meetings

The Paper and Pulp Section of the National Safety Congress opened its sessions on Monday, October 1, with a luncheon at the Waldorf-Astoria. The chairman, W. J. Peacock, head of the Department of Personnel of the Northern Paper Mills, Green Bay, Wis., presented a report covering the activities of the section during his three terms in office. In concluding his address, Mr. Peacock visioned a section organized into numerous regions, each with a director keen for results, and claimed that the machinery was at the command of the section for doing a significant piece of work which would undoubtedly prove profitable to the paper industry.

Five minute talks were given by the various regional directors, as follows:

Maine: Alvin Record, Supervisor of Safety, International Paper Company, Chisholm, Me.

Massachusetts: N. F. Bartlett, Traffic Manager, Hollingsworth & Vose Company, Boston.

Michigan: C. E. Torrance, Superintendent Planning and Personnel, Bryant Paper Company, Kalamazoo, Mich.

New York: C. H. O'Connell, Supervisor of Safety, International Paper Company, New York City.

Ohio: Kenneth L. Faist, Safety Director, Champion Coated Paper Company, Hamilton, Ohio.

Pennsylvania: E. J. Gayner, Assistant Factory Manager, Scott Paper Company, Chester, Pa.

Wisconsin Valley: F. H. Rosebush, Manager of Industrial Relations, Nekoosa-Edwards Paper Company, Port Edwards, Wis.

Fox River Valley: W. F. Ashe, Employment Manager, Thilmany Pulp and Paper Company, Kaukauna, Wis.

Safety Problems Discussed

"The Relative Importance of the Plant Safety Department" was discussed by W. F. Ashe, employment manager of the Thilmany Pulp and Paper Company, Kaukauna, Wis., at the Tuesday morning session.

Another interesting address was presented by C. H. O'Connell, safety engineer of the International Paper Company, New York City, who discussed "Some Outstanding Hazards in Paper Mills and Their Control."

Dr. J. G. Cunningham, Director of Industrial Hygiene, Department of Health, Toronto, Ont., also gave an able talk on "The Promotion of Health in Conjunction with Safety."

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Pennsylvania Paper Mills Expand Production

Manufacturers of Different Grades of Paper Board Particularly Active With Seasonal Requirements—Wrapping Paper Continues to Move Into Consumption In Good Volume—Request for Various Grades of Fine Paper Broadens Gradually.

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., October 8, 1928.—As the paper needs of industrial enterprises assume larger volume in the advancing autumn days the distributors are enjoying a brighter business outlook. The improved demand that commenced in late September has been extended and all lines of paper have been moving from warehouses in greater volume. While the demand increases a few of the dealers in the wrapping paper section are reporting a slightly better business this year than they experienced in the early October of 1927, and are optimistic of the future. The fine paper trade is more active. Wholesalers of fine grades are enjoying a continued demand but distributors are confined to hand to mouth orders of scattered grades that are seasonally more active than the general list.

As distributors extend their sales, manufacturers in the Quaker City district are likewise expanding production, though still confined to from 80 to 90 per cent of capacity in the majority of mills. Board mills are most active as the seasonal operations are adjusted to the law of supply and demand for all grades of paper stock.

While prices of all grades of paper stock are firmly held, the mills are not interested in the markets to any great extent at the present time. Dealers are having a hard time in securing any grades in quantities. Inquiries from the mills indicate that there soon will be a buyers market for the manufacturers and that stocks will be found wanting, as warehouses are bare of accumulations. There is enough available paper stock to meet the narrow demands of the present but if future mill needs increase there will be a dearth of supplies and higher prices.

Wholesale Paper Merchants Elect Officers

With the first of the Fall sessions of the Philadelphia Wholesale Paper Merchants Association, held last Friday at the Benjamin Franklin Hotel, there was elected a new line of officers to serve in the 1928-1929 term. Following a social hour at the dining table the following officers were elected: President, George K. Hooper, of the Hooper Paper and Twine Company; vice president, J. E. Waldman, of the Edwin T. Fitler Twine Company; Secretary, George Bierle, American Forest Products Company, and treasurer, Edward Van Schoonhoven, of the Knickerbocker Paper Company. The organization is now composed of 90 per cent of the mill representatives and wholesale paper merchants of the Quaker City trade and is the first organization in the country to be devoted to the wholesale dealers' welfare, as a group body of organized effort. There was elected to membership in the organization A. E. Chase, who recently became mill representative for the Columbia Twine Company, of Auburn, N. Y., and J. T. Reilly, of the Sabin Robinson Company.

The wholesale men will hold a Fall tournament with sporting program at the Roxborough Country Club, near Philadelphia, on October 10. There will be staged the championship games for the Quoit Players associated with the organization when a silver cup award will be donated to the champion quoit player by Frederic S. Balch, of the Schuylkill Paper Company, the first president of the organization elected upon its inception four years ago. There will be an entire day given over to other sports, including a golf tournament on the spacious grounds of the Roxborough Club, with a social gathering around the dinner table in the evening and at the luncheon hour when the awards for the various games will be made.

Philadelphia Paper Trade Association Meeting

With the attendance of the president of the Philadelphia Paper Trade Association, Simon Walter, of the firm of S. Walter, Inc., at the National Convention held in Chicago last week, there was presented to the national body the subject which occupied the attention of the local dealers at the quarterly meeting held in late September, which will be of interest to the paper industry as a whole in the form of a new feature in trade practices. This subject, which was discussed at the quarterly gathering last week, occupied the attention of the Fine Paper Division of Philadelphia at its monthly session in the Bourse on Wednesday and was relating to the proposed mill meetings to be standardized along seasonal sessions with a view to providing a uniform schedule upon which the distributors might depend for their stocking requirements and the methodical issuance and compilation of lists of products to the consumer patrons of the various houses. Heretofore the paper mills have held meetings with the distributors at any time that suited their convenience, without standardized schedule in relation to seasonal requirements of the dealers and their needs for listing the various products with current values upon which the consumer might depend as criterion for the seasonal activity of the market in the lines of fine papers particularly. This method of unseasonal sessions has created uncertainty on the part of the dealers with regard to listing products in the periodical list of commodities and price quotations which most houses send to the consumer at seasonal intervals. Leon Beck, of the Charles Beck Paper Company, who represented the Philadelphia Fine Paper Division at the National gathering in Chicago, sponsored the innovation which he laid before the assembly of paper merchants with a view to inducing the mill men to provide a regularly scheduled meeting at stated intervals with the distributors for the purpose of aiding in relieving this uncertainty of future marketing of the lines carried by the individual firms. This innovation in annual or seasonal mill gatherings of the manufacturers and distributors met the enthusiastic approval of the local paper dealers and Mr. Beck was instructed to take up the matter at the Chicago convention last week.

Other Philadelphia paper trade officials who journeyed to Chicago were Vice President W. S. Wilcox, of the Wilcox Walter Furlong Company, and T. H. B. Smythe, of the J. L. N. Smythe Company, delegate from the Wrapping Paper Division.

Cy Norton To Speak At Mail Convention

Among the speakers listed to occupy the platform at the International Direct Mail Advertising Convention and Exposition to be held here from October 17 to 19 is Cy Norton, of the Strathmore Paper Company. The entire convention and exposition will be held on the top floor of the Gimbel Building at 8th and Chestnut streets, directly opposite the Benjamin Franklin Hotel, which is the headquarters. There are 180 booths allotted to members and the supplies industries catering to the direct mail users. Among the educational exhibits successful campaigns are to be assembled showing the papers used and the forms of direct mail matter submitted.

Car Requirements For Paper Trade

According to announcement made at the meeting of the Atlantic States Shippers Advisory Board, which sojourned in quarterly session at Wilmington, Del., during the week, it was stated that the anticipated car requirements for the paper industry indicated a 25 per cent decrease from the same period of last year. Requirements totaling 3,250 cars for imported wood pulp during the last quarter of the current year show a 20 per cent increase over the same period of 1927. Prepared roofing and roofing materials is anticipated to be about the same as the last quarter of the preced-

ing year in so far as car requirements are concerned. The Advisory Board bases its statement upon a survey made for the months of October, November and December of this year, which showed that over 1,000,000 cars will be needed for the hauling of freight along the Atlantic states in that period for the Fall business.

William A. Hentz Honored

At a meeting of the directors of the D. L. Ward Company, Philadelphia, recently, William A. Hentz was elected vice-president in charge of the printing paper division. Mr. Hentz has been associated with the company as advertising manager in an executive capacity for the past twelve years, and during the absence of George W. Ward, president, as sales manager. Mr. Ward, in speaking of the appointment, states, "It is made at this time in deserved recognition of services rendered, particularly during my absence from the office this year."

Louis DeJonge Co. Shows New Box Papers

A complete new line of candy box papers has been marketed by the Louis De Jonge Company, specially designed for the holidays. The Philadelphia offices in the Insurance Company of North America Building, 16th and Arch streets, under management of William Bollenbach, who recently was assigned to the Quaker City office, is featuring these among the local trade in a new line of embossed effects and patterns. Walter Doescher, who for many years covered the Philadelphia trade for the De Jonge Company as its manager, has become affiliated with the New York house of the Pohlman Paper Company, jobbers of printing papers.

Progressive Paper Co. Now In New Home

With the removal of the stock of wrapping papers and other specialties carried by the Progressive Paper Company to its new home at 134 North Delaware avenue, the firm will have its entire lines stored in the three story warehouse which it has acquired in conjunction with sales and executive offices at this address. There are larger storage facilities in the new location which will be given over largely to the stocking of tissues as a specialized line.

Adjudication Granted Northampton Paper Mills

In the appointment of George F. Coffin, referee, in the involuntary bankruptcy proceedings brought against the Northampton Paper Mills, Inc., at Raubsville, Pa., adjudication was granted here last week by the United States District Court. The mills became involved in bankruptcy during the mid-summer. They are located in the Up-State section and are devoted to the manufacture of towels and crepe papers, light weight news, chip board, bogus wrapping paper and other specialties.

A. M. Collins Mfg. Co. To Exhibit

The A. M. Collins Manufacturing Company, producers of cover papers, photographers' supplies in paper goods, card board specialties, and box papers, will feature a special booth at the coming convention of the Direct Mail Advertisers Association. The exhibit will be staged at the Commercial Museum, where several paper houses will present displays. The Collins company booth will be constructed along novel lines and will be one of the attractions of the exhibition. The firm is one of the largest manufacturers of photo mounts in the nation and also produces a high grade assortment of book covers and fancy box makers' covers and other printing papers.

Frederick S. Balch Captures Motor Boat Award

Frederic S. Balch, of the Schuylkill Paper Company, 215 South 5th street, was awarded first prize in Class C and first honors in the Free For All Races held recently in Baltimore in the Outboard Motor Boat Races. The prize winning boat was the Baby Jack 2nd, owned by the local fine paper man, who is associated with the Seaside Park Yacht Club. It was manned by Skipper John Rowland, who piloted the Baby Jack to the prize winning goal.

Saxe Paper Co. Adds Sanitary Production Department

There has been added to the coarse paper specialties handled by the Saxe Paper Company, 320 Race street, a line of sanitary products which will be confined to a specialty department, headed by Morris Browne. The new department will stock towels, cups, toilet papers, napkins and allied lines for the soda fountain and food trades. The Saxe Paper Company has been engaged in the sale of wrapping paper and specialty lines for several years and has at its head Nathaniel Saxe.

W. S. Wilcox Awarded Prize At Ad Club Outing

W. S. Wilcox, of the Wilcox, Walter, Furlong Company, 17 South 6th street, was the winner of the Howard C. Story Cup, donated by the chairman of the Poor Richard Club, the fraternity of advertising men of the Quaker City, at the outing of the organization held last week at the Manufacturers Country Club. The Story Cup was awarded to Mr. Wilcox for his score of 82 in the Golf Tournament, which made up the sporting event of the program. Among the seventy members in attendance were George W. Ward, of the D. L. Ward Paper Company, Norbert A. Considine, of the Paper House of Pennsylvania, and Mr. Wilcox, who represented the paper committee of the Poor Richard Club.

Pennsylvania Gypsum Co. To Build Pier

For the purpose of taking care of its shipments of raw materials the Pennsylvania Gypsum Company is planning to construct its own pier and all mechanical devices for handling such products at its Chester, Pa., plant consumed in the production of building boards. The pier will be constructed along the water front of the plant, where sheds will be erected for the storing of the raw cargoes. While the pier is under construction the mechanical units of the plant will be enlarged and thoroughly modernized to meet the increased production requirements for its line of boards. In order to meet other competitive conditions the Pennsylvania Company is planning to build a plant in Brooklyn to supply the Metropolitan New York district.

Garrett-Buchanan Changes

With the combination of the management of the twin division of the Garrett-Buchanan Company, 16-20 South 6th street, with the wrapping paper section of the business, the direction of the department passes to Joseph S. Weaver, manager of the wrapping paper and specialty departments. Theodore Hartman will assist Manager Weaver in the twine sales division, which will continue to feature the lines manufactured by the Columbia Cordage Company, of Auburn, N. Y., which were acquired with the consolidation of the Park Weikert Company with the Garrett-Buchanan Company. The twine department of the Garrett-Buchanan Company is housed in the former warehouses and sales rooms of the Park Weikert Company on Marshall street, near Ludlow, where they will remain under the new management.

George C. Webber Passes Away

George C. Webber, assistant sales manager of the American Engineering Company, died at his home in Philadelphia, October 1. Mr. Webber, who was born in Milton, N. H., 37 years ago, had been associated with the American Engineering Company and its predecessor, the American Ship Windlass Company, for more than seventeen years, having entered the employ of the latter company in Providence, R. I., in 1911. Although in poor health for the past eight months, he had recovered sufficiently to partially resume his duties.

Quaker City Paper Co. In New Quarters

The Quaker City Paper Company announces its removal to new offices and warehouses at 303-311 Vine street, Philadelphia. Telephones: Bell, Market 5491 and Keystone, Main 2449.

Abitibi Buys Timber for Sault Ste. Marie Mill

Purchase Involves Cutting Rights to Approximately 50,000 Cords of Pulpwood — Increased Demand for News Print Anticipated This Month—Little Likelihood of Maritime Provinces Taking Part in Proposed Conference of Premiers and Mill Interests

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., October 8, 1928.—Sales of 81 square miles of pulpwood and jack pine in the township of Simpson, 100 miles from Sault Ste. Marie, Ont., to the Abitibi Power and Paper Company and the Algoma Central Railway, was announced a few days ago by the Department of Lands and Forests in Toronto. The purchase involves the cutting rights to approximately 50,000 cords of pulpwood, 63,000 railway ties and 200,000 feet board measure of large-sized jack pine. Prices realized by the department were $2 a cord for the pulpwood, 15 cents per tie, and $6.50 per thousand for the jack pine. The purchase is a joint one, the pulpwood to be used by the Abitibi people in their Sault mill, and the ties going to the Algoma Central Railway for road construction purposes. In fact the department stipulated that the pulpwood had to be taken off at the same time as the jack pine in order to avert the danger of a fire hazard which otherwise might arise. At different times in the past several years the Government has put up small areas for the Algoma Central Railway in order to provide tie timber that is not available on the company's own lands.

Proposed News Print Conference Delayed

Progress in making arrangements for the proposed conference between the premiers of Ontario and Quebec and the heads of the Canadian news print mills is admittedly slow on account of the very difficult problem that confronts all parties. Several of the mills that are operating to capacity are asking why they should be expected to give up any of the tonnage they have contracted for already for 1929, or are confident of securing, in order to raise the operating ratio of some other mills from 60, 65 or 80 per cent of capacity. The other mills, operating far below 100 per cent, maintain that they have stood firm in maintaining present prices in spite of losing some of their old tonnage through other mills "cutting in," and cannot be expected to continue into next year without making a real effort to secure new contracts and increase their operating ratio. Naturally the Premiers of Ontario and Quebec, both of whom are anxious to see a settlement of the present situation, do not feel like holding a conference until something definite is in sight in the way of a proposal. On the other hand, it is reasonably clear that neither the Government of Nova Scotia nor New Brunswick is likely to take part in such a conference. In each case strong political pressure has been brought to bear to encourage the development of pulp and paper mills in the Maritime Provinces, where the industry has made comparatively little progress, as compared with the remarkable developments that have taken place in the provinces of Ontario and Quebec. In Nova Scotia, the Mersey River Paper Company, controlled by I. W. Killam, is going ahead, while the International Paper Company in New Brunswick has already deferred the construction of a news print mill, to be associated with its St. John River Power Company, for a matter of two years; and this connection, along with the obvious desire of the Government, is making it go ahead. Meantime an improvement in the demand for and production of news print is expected for October.

Fire Protection Efforts in Algoma

"No fires to speak of," is the report so far this season of officials directing the fight against conflagrations in Algoma's forest regions—an encouraging report taking into consideration the fact that seven million acres of pulpwood and other timber wealth in the Sault forest area is patrolled by only one flying machine and 80 rangers. Successful efforts of Government departments in curbing menaces and minimizing the toll of destruction to a far greater extent than ever before in the history of fire hazard in the north country are modestly put down to wet weather conditions and other natural elements by the district forester, whose own meritorious work in organizing his district is largely responsible for the present standard of efficiency. Fifteen lookout towers, six of them rising 80 feet in the air and giving the tower men in their eight windowed weather proof cabins a range of good visibility of 15 to 20 miles, are scattered over the more settled and traveled sections for fire detection. First class telephone service links up these towers with headquarters in the Sault so that ground forces may be mustered at a given point with the least possible delay. Sault Ste. Marie is the headquarters of the provincial air service which comprises twelve planes of the H2SL type, nine moths, and one DeHaviland craft.

Thunder Bay Mill Down Temporarily

A dispatch from Port Arthur a few days ago contained an official announcement of the temporary suspension of manufacturing operations by the Thunder Bay Paper Company's mill at Bare Point. The statement was given out by the manager, C. E. Jackson. It is hoped that the manufacture of news print will be resumed some time in November. A portion of the wages will be paid to a large number of paper mill employees as long as they are out of employment.

Most Forest Fires Due To Man

Criticism generally directed at railways as the cause of the majority of forest fires is dispelled by the Ontario Department of Forestry, which points out in a recently published bulletin, that 90 per cent of Ontario's forest fires are due to man, his bad judgment, his carelessness, or his indifference, and are therefore preventable. One of the methods adopted by the department to emphasize the necessity of exercising care in the bush is the establishment of registration centers at convenient points where all tourists and others entering the bush are required to sign their name and give the man on duty a general idea of where he intends to travel. In this way the fire rangers are in a position to check up closely on travellers who do not adhere to the regulations requiring them to put their fires dead out. The Mississauga Forest Reserve is one branch where this system has been found to work most favorably.

Howard Smith Visits His New Mill

C. Howard Smith, Montreal, head of the Howard Smith Paper Mills, Ltd., and owner of the Lincoln and Lybster plants of the Lincoln Pulp and Paper Company at Merritton, which he recently acquired, paid a flying visit to Merritton a few days ago. In an interview he said that there was a great future for the plant and that they had plans for enlargement and expansion to keep pace with the growth of the country. One of the difficulties to be overcome was the problem of better water and this would be remedied in the near future. Mr. Smith said that one of the requisites in the paper industry was water, and he added: "You can see the muddy element outside which we have to use at present. This consists of water churned up by the dredging of the new canal and the industrial effluent which comes down from above our mill. We use about as much water as the whole of the city of St. Catharines." In the Cornwall plant the Howard Smith Paper Mills use thirty-three million gallons of water per day. In his various plants Mr. Smith has a payroll of $1,250,000 per year. At the combined two mills at Merritton which he has just acquired there

is an annual payroll of $350,000. The company will manufacture specialty paper of various kinds. The plant originally was never designed for anything else. The Canadian market is expanding and the indigenous paper industry of the company must expand as well to meet the growing demand. The old disused mill of the Kinleith Paper Company at St. Catharines is also owned by Mr. Smith's company. Asked as to what disposition will be made of the property he said there were no plans and lack of water and railway site necessitated the closing of the plant. The organization is being kept intact, however, and the charter is alive, but nothing could be said as to future prospects. K. S. Maclachlan is the general manager of the Lincoln Pulp and Paper Mills and he spent several hours with Mr. Smith, the latter declaring that the company should have two machines in the Lybster mill. One interesting feature which Mr. Smith discovered in his tour of the Lincoln plant was a picture on the wall of the manager and a group of employees who have been with the company for twenty-five years or over.

New Board Mill Now in Operation

With the opening a few days ago of the new plant in Toronto, Canadian Paperboard Company, Ltd., will increase its total output by some 150 tons a day. This marks the most recent step in the development of a company which started operations twenty-five years ago, and has grown from a small beginning to its present status—the largest manufacturer of paper board in Canada. Plants are also located at Frankford and Campbellford, Ont., and Montreal. The company owns water rights on the Lachine Canal and on the Trent River at Frankford and Campbellford. These two latter plants are operated by the Quinte and Trent Valley Power, with an installation of 400 hp. Canadian Paperboard controls the Quinte and Trent Valley Power, and is in turn controlled by the Northern Paperboard Company, which owns over eighty per cent of the common stock. The last annual report of the company showed net earnings of $198,027 before making provision for bond interest and depreciation. The mills have been operating to capacity and gross production was 30,770 tons, as compared with 27,856 tons in the previous fiscal year.

Notes and Jottings of the Trade

A number of the Toronto wholesale paper merchants were interested in the appointment of a receivership for the United Press, Ltd., a large printing concern doing business on Richmond street, Toronto. The company formerly had the contract for Ontario Government printing which ran into hundreds of thousands of dollars a year, but the Government recently decided to distribute its contracts to printers throughout the province. The withdrawal of this line of work crippled the finances of the United Press for the time being at least. Although a receiver is now in charge of the plant the assets are said to be sufficient to preclude losses of any great extent to paper merchants and others. The firm is carrying on operations pending a meeting of creditors when a reorganization may be effected.

Among the imported papers now finding favor in Canada is Ivory Book which is handled in Toronto by Wilson-Munroe Company. It is a high grade English book paper and is made in India and blue tints as well as white.

Foundations are now going in for the construction of the new three-story paper box plant at Mount Dennis, near Toronto, for Firstbrook Boxes, Ltd. Plans call for a structure 322 by 167 feet, together with a boiler house 47 by 70 feet. The cost is placed for the entire plant at $350,000.

The importance of the pulp and paper industry in relation to the prosperity of the Niagara Peninsula was ably demonstrated when Newton Candes, of the chemical department of the Lincoln Pulp and Paper Company, at Merritton, Ont., gave an interesting talk on the industry before the Lion's Club of St. Catharines. The speaker referred to the establishment of the first sulphite paper mill in Canada at Merritton in 1885, and also to the fact that not until the year 1860 was paper manufactured from pulpwood.

C. V. Syrett Paper Company, Ltd., 61 Front street, Toronto, have taken on the Ontario agency for "Soisette" and "La Fleur" lines of French perfumed and colored toilet papers. These papers are put out in five different shades and the firm reports a good demand for them.

The United Paper Mills, Ltd., Toronto, Hamilton and London, has just mailed out a very effective broadside under the heading "Localized Service." The broadside contains cuts of the various distributing center warehouses and offices and effective maps indicate the strategic points at which these are located in order the service might be rendered the various districts in the province. London serves Essex, Middlesex and Kent Counties, together with Huron and Perth, while Brant and Lincoln are served by Hamilton and Grey. Dufferin, Peel and York are supplied by the Toronto warehouse. Each of these counties is illustrated by maps showing roads and towns and cities. The broadside is one of a series of good-will building advertisements.

One hundred and fifty members of the Canadian Ticket Agents' Association recently visited Iroquois Falls, Ont., where they were entertained at luncheon and visited all departments of the Abitibi Power and Paper Company.

A recent dispatch from Port Arthur, Ont., says that an engineering project unique in Canadian industry was lately declared a success when tests were made of a pipe line by which ground wood pulp in slush form was carried from the grinding mill of the Thunder Bay Paper Company at Current River to the paper mill two miles north. The Thunder Bay Paper Company states that the tests were highly satisfactory. The pipe is of cast iron ten inches in diameter, and two miles long.

Notice is given in the last edition of the *Canada Gazette* that the capital stock of McFarlane, Son & Hodgson, Ltd., wholesale paper dealers, of Montreal, has been decreased from $250,000 to $100,000, such decrease being effective by the purchase and reduction by the company of 1,500 shares of preferred stock of the par value of $100 each.

D. G. Calvert, general manager of the Fort William Paper Company, Fort William, Ont., when asked a few days ago regarding the re-opening of the Fort William mills, which was closed down early this summer, said that he had no information on the subject. He added that as soon as the news print situation rights itself the mill would start operations again. That time, he said, might not be far distant.

Several important changes have been made in the staff of Provincial Paper Sales, Ltd., at Winnipeg, as reported from the Provincial office in Toronto. H. B. Kirby, for the past eight years manager of the Calgary branch, has been made sales manager of the company, with headquarters in Winnipeg. He joined the company in 1917. W. J. Thompson, for thirteen years manager of the Edmonton Branch, has been appointed manager at Calgary. George Hatch has been appointed manager at Edmonton. Mr. Hatch has been with the company for many years at Winnipeg.

Refusal of the company to recognize an international union is said to be the cause of a strike at the recently opened plant of the Spruce Falls Pulp and Paper Company, at Kapuskasing, Ont. Between fifty and sixty men, all paper makers, are involved, it is stated in reports reaching Toronto. Efforts are now being made to adjust matters by arbitration.

Don Valley Paper Mills, Ltd., Toronto, which company was recently taken over by Norman E. Wainwright, late of Provincial Paper, Ltd., have opened a down town office in the old Standard Stock Exchange building on King street West, Toronto.

Finnish Paper Exports

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., October 3, 1928.—Finnish paper exports in August totaled 20,292 tons compared with 21,366 tons during the corresponding month of last year. Exports for the first eight months of this year amounted to 155,919 tons as against 149,422 tons during the first eight months of last year.

Grand Falls Power Plant Begins Operating

First Unit of International Paper Subsidiary, the St. John River Power Co., Has Capacity of 20,000 h.p.—Three Other Units of Similar Capacity Being Installed—Lord Willingdon Inspects Pulp and Paper Mill At Edmundston, New Brunswick.

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., October 8, 1928.—During the past week, Lord Willingdon, Governor-General of Canada, has visited the power plant of the St. John River Company at Grand Falls, N. B. His visit coincided with the ceremony of putting the first unit of the plant into operation. The unit has a capacity of 20,000 h.p., and three other units of similar capacity are being installed. The St. John River Power Company is a subsidiary of the International Paper Company.

While in New Brunswick his Excellency also visited the pulp and paper plant of the Fraser Companies, Ltd., at Edmundston.

Canada Paper Sells Windsor Mills

Canada Power and Paper Corporation has sold its plant at Windsor Mills, Que., to a new company, of which C. Howard Smith will be president and Harold Crabtree vice-president. This unit, originally a kraft producer, has produced 50 tons of news print per day. The new company will discontinue the production of news print and concentrate on kraft, m.g. wrapping paper and colored specials. Bleached ground wood pulp will be used in the manufacture of paper.

The equipment of the mills includes four Fourdrinier paper machines, the widest trimmed sheet produced being 146 inches. The capacity is 200,000 lbs. of news, manilas, color and book papers per 24 hours. The capacity for the production of pulp is 120,000 lbs. of ground wood per day and 60,000 lbs. of soda fiber.

An interesting personal touch in connection with the deal is that Mr. Smith, the president of the new organization, entered the employ of the old Canada Paper Company as a boy when the company's warehouse was on Craig street, Montreal, on the site now occupied by the Bank of Montreal. He afterwards became a salesman and after some other connection established the business which bears his name and now occupies a commanding position in the fine paper manufacturing business. Now he goes back to the company he started with as a boy in the role of president.

The New Paper Mill In Nova Scotia

The Mersey Paper Company, which is constructing a news print mill in Nova Scotia, is understood to be party to an agreement by which a close working arrangement will be effected with Price Brothers & Co., of Quebec, along the lines that the latter firm has effected with the Donnacona Paper Company.

The new Mersey Paper Company's plant site is located on deep water 600 miles from New York, the largest paper consuming center of the world and the chief market for news print in the United States. The strategic position of the plant places the company in a position where it could ship its output by water to points on the Gulf of Mexico at a cost less than the rail rate paid by inland mills which sell only as far south as New York.

The project is backed by I. W. Killam, of Montreal, and his associates. Colonel C. H. L. Jones, who has been actively engaged in the pulp and paper industry since 1901, is president and executive head of the company.

Abitibi's New Directors

At a meeting of the Board of Directors of the Abitibi Power and Paper Company, the board was enlarged as a result of the Amalgamation with the Spanish River Company. The following additional directors were elected: George H. Mead, Dayton, Ohio.; P. B. Wilson, Montreal; George R. Gray, Sault Ste. Marie; T. Watson Sime, Toronto, and T. H. Watson, Toronto. George H. Mead was also elected as chairman of the board of directors.

Improving Hudson River Mill

[FROM OUR REGULAR CORRESPONDENT]

CORINTH, N. Y., October 1, 1928.—The program of improvements mapped out early in the summer by the International Paper Company for the Hudson River Mill is now well under way with the breaking of ground recently for a new structure adjoining the main plant. This building alone, which is but one item in the local improvement program, will cost approximately $100,000, according to estimates.

The Hudson River Mill, for years one of the principal news print producing mills of the I. P. Co., is being converted to manufacture a product similar to that now turned out at the Fort Edward Mill. The Domil Construction Company is in charge of the construction work and has a large force of mechanics at work.

The new building will be entirely modern in every respect and as near fireproof as it is possible to make it. It is being erected on the plot of ground immediately adjoining the machine room of the main plant. The structure will be used as a super-calendar building when completed.

PICTURE TAKEN AT AMERICAN WRITING PAPER CO. SALES CONFERENCE, SEPTEMBER 24-25, HOLYOKE, MASS.

Paper Men Hold Eventful Session in Chicago

Many Vital Problems Thrashed Out At Fall Meeting of National Paper Trade Association Last Week, Including Over-Production and Distribution — Advertising and Publicity Programs Apparently Dropped—Every Branch of Paper Trade Represented

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., October 8, 1928.—More than 250 paper men, representing every branch of the industry, were in Chicago this week attending the Fall Meeting of the National Paper Trade Association, held at the Congress Hotel, October 1, 2 and 3.

Attendance the first day of the meeting was exceptionally good for an opening day and even though many were conferring in the number of committee meetings held Monday, there were plenty of smaller groups around the hotel discussing paper conditions in general.

Twine Conference Opens Proceedings

The Twine Committee Conference was the first event to open the three-day session, with C. A. Shaw, of Whitney Bros., Boston, chairman of the committee, presiding. The Gummed Tape Committee, with L. J. Marshall, Marshall Paper Company, presiding; the Survey Committee with R. H. Wellington of The Alling & Cory Company, Rochester, as chairman, and the Tissues and Trade Customs Committees presided over by A. J. Corning of Hubbs & Corning, Baltimore, also held meetings Monday morning.

Four committees of the Fine Paper Division, the Survey Committee, Chas. A. Esty Paper Company, Worcester, Mass., chairman; The Efficiency Committee, with Leon Beck, Charles Beck Company, Philadelphia, chairman; the Clearing House Committee, with R. E. Myers of R. M. Myers & Company, Rochester, N. Y., chairman, and the Administration and Executive Committees, met also on Monday.

A meeting of the board of directors of both divisions was held Monday evening.

C. A. Crocker Addresses Fine Paper Men

The Fall Meeting went into full swing on Tuesday morning with the meeting of the Fine Paper Division in the Florentine Room to begin the program. Although most of the time of the session was given over to routine matters, including reports of committees, one feature addres was given to a very interested audience. C. A. Crocker, of Crocker-McElwain Company and Chemical Pulp Manufacturing Company, talked to fine paper men in attendance on the subject "The Paper Merchant from Where I Sit." Years of experience, both in the paper field and in an allied industry, have given Mr. Crocker the background that made his subject of unusual interest.

H. A. Wheeler Talks on Finance

Following meetings of the Kraft, Bag and Survey Committees under the direction of their chairman, namely and in order given: J. A. Carpenter, Kansas City Paper House, Kansas City; S. L. Schwartz, Schwartz Paper Company, Chicago, and R. H. Wellington, the Wrapping Paper Division held its first complete group meeting in the Florentine room in the afternoon. Here Harry A. Wheeler, vice president of the Union Trust Company, Chicago, was the speaker and his address was full of interesting information on finance and speculation. Mr. Wheeler is at the helm of one of the country's greatest trust organizations and his cause and effect logic in analyzing finance and speculation was accepted by paper men present with much appreciation. The remainder of the meeting was taken up with routine matters, including committee reports.

Round Table Dinner Successful

The Round Table Dinner for both divisions held on Tueday evening was a distinct innovation but it was so completely successful, according to Noble Gillette, president of the National Paper Trade Association, that it bids fair to become a permanent affair. Presidents and secretaries of sixteen associations in both the fine and wrapping paper lines met at a dinner at which Mr. Gillette presided and then following an excellent dinner, provided an interchange of thoughts, experiences and plans that proved valuable for every one present.

Salesmen's Luncheon Well Attended

Tuesday noon the Salesmen's Association of the Paper Industry gave its important luncheon with Harper Leech, well known financial editor of the *Chicago Tribune* as the chief speaker. Mr. Leech's well chosen words on the financial aspect of the country dependent on certain conditions were mixed in with an excellent address and forcefulness of delivery. Other things happened at the luncheon that are of interest to every one connected with the Salesmens Association. Tom Donahue, of the Warren Manufacturing Company was given a duffle bag as a reward for his constant and successful effort as chairman of the golf committee. The *American Paper Merchant* presented a trophy to the Association man with the low net score for the entire season of golf play and P. S. Church, of the George H. Mead Company, Dayton, Ohio, won this signal honor.

The popular president of the national organization, Jim Coy of the Flambeau Paper Company, then presented the Chicago division of the Salesmens Association with a beautiful trophy placed in circulation by R. B. Harbison of the International Paper Trophy, to be contested for as was the Outterson Memorial Gold Trophy which was permanently won by the Chicago division.

Eighty-five salesmen and guests were present at the luncheon.

Over Production and Distribution Discussed

The General Meeting of both the Fine and Wrapping Paper Divisions was held at 10:00 o'clock Wednesday morning in the Florentine Room. At this meeting a general summary of committee findings took up a part of the time. The feature of the entire program was an address given by Franklin B. Jones, well-known author, student and lecturer on the subject of "Over Production and Distribution." Mr. Jones is a member of the law firm of Davies, Jones & Beebe, Washington, D. C., is a past Secretary of the Federal Trade Commission and is at present counsel for the American Waxed Paper Association. One of his most well known books is "Trade Association Activities and the Law."

Interesting Picture of Conditions

With this splendid background of experience and investigation in all of the problems now confronting the paper merchant, Mr. Jones gave an interesting picture of the present condition of over production and of distribution, called in his experience to explain points in the solving of the problem of over production and gave the association one of the finest bits of informative advice.

Survey Committee's Work

Wednesday afternoon another of the well attended Survey Forums was held under the direction of C. A. Spaulding of the Carpenter Paper Company, Des Moines, Iowa. In both the Fine and Wrapping Paper Divisions the Survey Committee work and the Survey Forums were presented to paper men from headquar-

(*Continued on page 32*)

Production at Wisconsin Rapids Mill Expands

Paper Machines Show Greater Efficiency, Following Temporary Shutdown at Consolidated Power & Paper Co.'s Plant for Changes in Equipment and Various Other Improvements —Thirteen Mile Railroad Planned to Transport Timber to Wisconsin Paper Plants

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., October 8, 1928.—When machines at the Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis., were started up recently after a shutdown, they showed improved production due to changes made during the recess.

Machines Nos. 1 and 2 were equipped with new Beloit suction rolls, and new Fourdriniers with Beloit high speed shakes. The new Fourdriniers are equipped with roller bearing breast rolls and tube rolls, and have a wire length of 85 feet instead of 65 feet, as was heretofore used on these machines. Smoothing rolls were also added so as to give finish to the sheet.

Widening of No. 1 machine was accomplished, so that it now produces a sheet with a trim of 127 inches instead of 122½ inches. No. 2 machine remains at 122½ inches. The latter also has been equipped with two calender stacks and a drum reel.

New hoods have been put on the machines, and the appearance of the room has also been improved by putting in a false ceiling.

The shutdown during which this work was accomplished was necessary because of the need of a new set of thrash racks in front of the grinder wheels. The old rack bars were in service 25 years and have been replaced by steel ones. All gates of the dam were opened and the water allowed to recede.

Rosebush Plans Railroad to Timber Holdings

Judson G. Rosebush, president respectively of the Patten Paper Company, of Appleton, Wis., and the Northern Paper Mills, Green Bay, Wis., is having a railroad line thirteen miles long built from Amasa, Mich., to his timber holdings. The tract located between Hemlock and Deer rivers is to be logged this winter and the branch was necessary in order to provide transportation.

Pulpwood Rafting Completed

Rafting of pulpwood across Lake Superior from Canada to Ashland, Wis., has been finished for the season by the Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis. The company's tug Butterfield convoyed a total of six rafts containing about 72,000 cords of pulpwood. All of the trips were made without mishap. The record loading for the season was 1,217.93 cords, or 52 cars. This task was accomplished by the loading crew in two shifts.

Walter L. Mead Addresses Foremen

Twelve meetings will be held by a foreman's training class which has been started among employees of the Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis. This is the first year this plan has been followed there. The work is in charge of W. A. Sprise, director of the vocational school, and H. G. Noyes, state director of paper, pulp and safety courses. Walter L. Mead, of the Consolidated company, spoke at the first session. He explained the course and its aims and introduced those who would direct the course.

Compensation Cases Before Commission

One compensation case growing out of the disaster a year ago at the Kimberly-Clark Corporation's mill at Kimberly, Wis., is before the Wisconsin Industrial Commission for decision. The collapse of the beater room, it will be remembered, caused the death of nine men and the injury of twenty-three others. The appellant in this case is Gus Polcin. He was employed by the C. R. Meyer & Sons Company, who were doing construction work at the mill and was caught beneath some of the wreckage. He alleges he is permanently disabled because he suffered five broken ribs, a broken shoulder, serious internal injuries, broken bones in his left leg and foot and in his right arm and hand, and other severe body injuries.

Another case before the commission is that of John Hahn, an employee of the Neenah Paper Company, Neenah, Wis. He asks compensation because of the loss of a toe. His injury was caused by a large piece of alum which fell and crushed the toe so it had to be amputated. Decisions will be made by the commission later.

PAPER MEN MEET IN CHICAGO

(*Continued from page 30*)

ters where questions were asked and suggestions received on the subject of Net Profit Control, now being given such a thorough study by the Association.

Advertising Campaign Shelved

Only one subject had a regretful outcome. The proposed plan of the marketing committee seems to have been completely shelved by the association. This plan, already known to paper men in every line of the industry, was to advertise the entire paper industry and to educate the public in general on the many uses of paper, to be copied after the many great advertising and publicity programs being carried on by progressive industries to increase consumption of their merchandise.

Many paper men were heard to express regrets on what seemed to be the final dropping of the plan. It seemed to be an opinion that the paper industry should be strong enough and possess enough foresight to go ahead and put over a plan that even admittedly weaker organizations have already successfully completed.

According to Noble Gillette, president of the association, and Frank Floyd, secretary, the Fall Meeting was one of the most successful from standpoint of attendance and work accomplished that has ever been held. Members were enthusiastic and though no revolutionary or unusual piece of work was transacted the "house was certainly put in order" for the coming Annual Meeting to be held at the Waldorf-Astoria Hotel in New York City, February 18, 19, 20 and 21.

Plan for International Paper & Power Co.

The plan for the formation of International Paper and Power Company as a holding company for the properties of International Paper Company is to be declared effective October 1.

Under the Plan 7 per cent preferred stockholders will receive 7 per cent preferred stock of International Paper and Power Company share for share carrying rights of conversion into Class A common Stock. Common stockholders will receive three shares of common stock of the new company, one each of the three Classes, A, B and C.

The International Paper and Power Company is expected to acquire control of the extensive power and distributing systems of New England Power Association, the largest utility organization in the New England States, and upon acquiring control will have a capitalization of about $550,000,000.

Waterpowers developed and under construction of International Paper Company and New England Power Association with their subsidiaries amount to over 1,300,000 hp., capable of being increased through further development and utilization of undeveloped sites to a total of over 2,600,000 horsepower. In addition the New England Power Association system owns and operates about 382,000 horsepower of steam electric capacity.

For Clean Rolls

BIRD MACHINERY

You can use Vickery Doctors

on *press rolls* to reduce breaks and pick-ups

on *breast or wire guide rolls* to lengthen wire life

on *dryers* to get a better finish and save steam

on *calenders and other rolls* to save time and trouble

and on *all rolls* to keep them one hundred per cent CLEAN.

Let us show you.

2345

BIRD MACHINE COMPANY

South Walpole : : Massachusetts

Waxed Paper Business Conduct Rules Endorsed

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., October 10, 1928.—Fourteen rules of business conduct adopted by the waxed paper industry at a trade practice conference held under auspices of the Federal Trade Commission last June in Washington have been in part affirmatively approved by the commission and in part accepted as expressions of the trade.

Nine of the fourteen rules were affirmatively approved. They have to do with the following practices: inducing breach of contract, imitation of trade-marks or trade names, enticement of employes, defamation of competitor or disparagement of his goods, threats of suit for patent or trade-mark infringement, use of inferior materials, discrimination in price by means of split shipments, repudiation of contracts, and deviation from standards.

Rules accepted by the commission only as expressions of the trade concern the following practices: ambiguous or incomplete contracts, discrimination in price by means of etchings or plates, discrimination in price by means of ink coverage, selling goods below cost, and delivery points.

The following rules of business conduct were unanimously adopted. Arranged into groups, those appearing under Group I are affirmatively approved by the Commission. These falling under Group II are accepted as expressions of the trade. The rules as approved by the Commission will become effective, Octobe 15.

Group I.

INCLUDING BREACH OF CONTRACT

Rule 1.—Inducing or attempting to induce the breach of a contract between a competitor and his customer during the term of such contract, is an unfair method of competition.

Note: Whenever notice of the existence of a contract is brought to the attention of any person in any way, he shall promptly discontinue all efforts which might induce a contracting party to break such contract.

IMITATION OF TRADE MARKS OR TRADE NAMES

Rule 2.—The imitation of the trade-mark or trade name of a competitor results in the deception of buyers and consumers, is an invasion of the property rights of such competitor, and is an unfair trade practice.

ENTICEMENT OF EMPLOYES

Rule 3.—Interference with a competitor's business through the enticement of employes from his employment is an unfair trade practice.

DEFAMATION OF COMPETITOR OR DISPARAGEMENT OF HIS GOODS

Rule 4.—The defamation of a competitor by words or acts imputing to him dishonorable conduct, inability to perform contracts, or questionable credit standing, or the false disparagement of the grades or quality of his goods, is unfair trade practice.

THREATS OF SUIT FOR PATENT OR TRADE MARK INFRINGEMENT

Rule 5.—The circularization of threats of suit for infringement of patent or trade-mark among customers of a competitor, not made in good faith and for the purpose of harassing and intimidating customers is an unfair trade practice. The owner of a patent or trade-mark should, in fairness, deal directly with the alleged original infringer rather than attempt to intimidate his customers.

USE OF INFERIOR MATERIALS

Rule 6.—The use of wax which is not fully refined, tasteless, odorless, and of the proper melting point for the purpose for which used, or the use of any inferior material which tends to bring waxed paper into disrepute or to defraud the buyer or the public, is an unfair trade practice.

DISCRIMINATION IN PRICE BY MEANS OF SPLIT SHIPMENTS

Rule 7.—The practice of accepting orders in large quantities for manufacture and shipment in small quantities (known as split shipments) at prices which do not provide for the increased cost of manufacture in such small quantities, results in unfair discriminations in price between customers, in practical effect giving quantity prices on small deliveries to favored buyers who are not justified by any reduction in costs to manufacturer because of quantity or any difference in grade or quality, and is an unfair trade practice. It is the judgement of this conference that the manufacturer of waxed paper who accepts quantity orders for split shipments should make a differential in price equal to his actual increased costs of manufacture, on each split shipment, in fixing his sales price.

REPUDIATION OF CONTRACTS

Rule 8.—Contracts, either written or oral, are business obligations which should be preformed in letter and in spirit. The repudiation of contracts by sellers on a rising market, or by buyers on a declining market, is equally reprehensible. Such action shatters confidence, induces violent fluctuations in price, destroys stability in business operations to the consequent injury of the industry as well as the general public, and is an unfair trade practice.

DEVIATION FROM STANDARDS

Rule 9.—Any deviation from the established standards of the industry causes confusion and waste, affords opportunity for discrimination and fraud, and any such deviation, unless the buyer is fully informed of the fact, is an unfair trade practice.

Group II.

AMBIGUOUS OR INCOMPLETE CONTRACTS

Rule 10.—The making of contracts which do not expressly cover specifications, time for delivery, inspection, filing of claims and other items necessary to form a complete, unambiguous contract, often results in price discrimination, induces fraud, breach of contract and constant disputes which create suspicion and ill feeling in the industry, and is an unfair trade practice. It is the judgement of this conference that the industry should adopt, in cooperation with buyers, a standard form of contract which will avoid ambiguity, prevent misunderstanding, and thoorughly protect the rights of both buyers and sellers.

DISCRIMINATION IN PRICE BY MEANS OF ETCHINGS OR PLATES

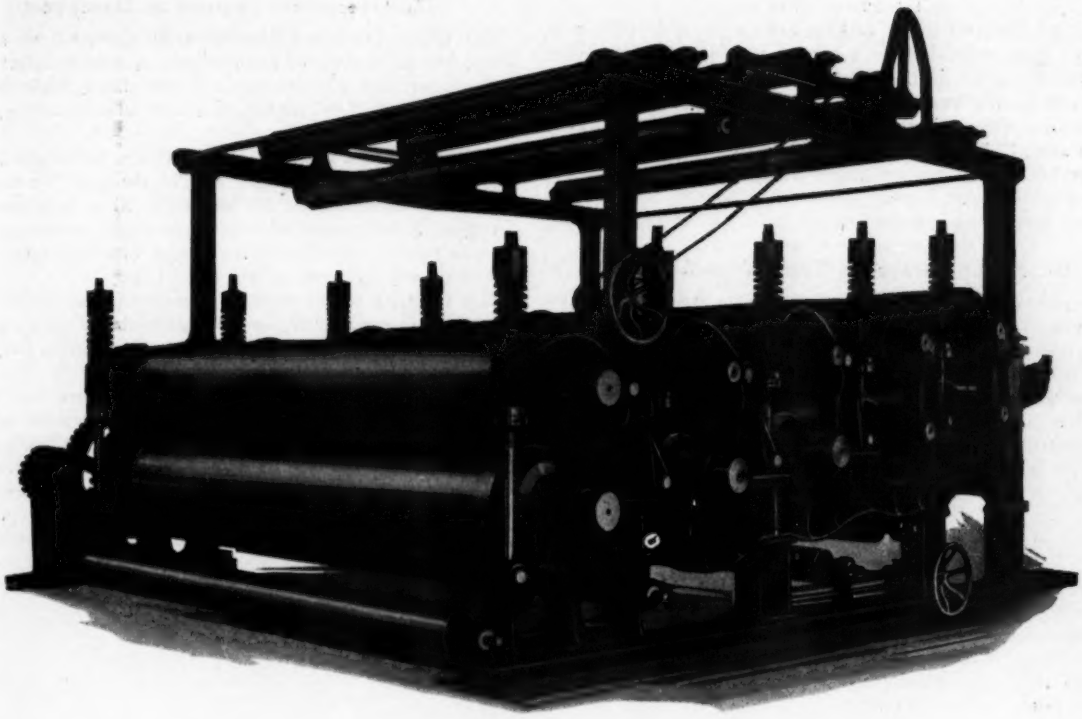
Rule 11.—Furnishing, without direct charge based on actual cost, of etchings and plates, which vary greatly in cost and value, results in unfair, indirect discriminations in price between customers, which are in no sense made on account of differences in grade, quality or quantity, and is an unfair trade practice. It is the judgement of this conference that a manufacturer should not supply etchings or plates either of new or modified designs for less than the actual cost of such work or materials as a separate, direct charge, all etchings and plates to be the property of the buyer and subject to his orders.

DISCRIMINATION IN PRICE BY MEANS OF INK COVERAGE

Rule 12.—The quotation of uniform prices by a manufacturer for printed waxed paper regardless of the ink coverage, which varies greatly in cost and value, results in unfair, indirect discriminations in price between customers, which are in no sense made on account of differences in grade, quality or quantity, and is an unfair trade practice.

SELLING GOODS BELOW COST

Rule 13.—The selling of goods below cost, except to meet a price offered by a competitor, is an unfair trade practice. Such a practice eliminates competition regardless of its efficiency, results in great loss to the industry, encourages price discriminations which may effect other industries, and is an unfair trade practice. It is the judgement of this conference that every manufacturer of waxed paper should install a cost system which will enable him to accurately determine his costs.



Let us Solve Your Special Requirements

DURING our long experience in designing and building paper and board machines, we have frequently been called on to produce special machines for some unusual requirement. We have built Vulcanized Fibre Machines, Roofing Felt Machines, Saturating Machines, Pasting Machines for Wall and Container Board, etc. The illustration shows the Press Section of one of several Insulite Machines recently built by us.

If you require any special machine for your paper or board manufacturing process, consult our engineers and let them assist in solving your problem.

Our Products Meet Our Promises

DOWNINGTOWN Manufacturing Company Downingtown, Pa., U. S. A.

CAN. REP. FOR KILBERRY SUCTION ROLLS - CHAS. WALMSLEY & CO. CANADA LTD. MONTREAL QUE.

DELIVERY POINTS

Rule 14.—The practice of making sales on a f.o.b. mill basis has been long established as a custom in the industry. Much confusion has arisen in the industry, causing unfair competition, as a result of members of the industry selling their merchandise on a basis of free delivery in some instances and in others selling the same f.o.b. mill. Such a practice causes price discrimination, results in the granting of discounts on transportation charges upon which the seller himself receives no discount, and destroys the basis upon which competition can fairly and openly function.

Dr. Baker Speaks on Trade Associations

The cultivation of better public relations as a major activity for trade associations executives was advocated by Dr. Hugh P. Baker, manager of the Trade Association Department of the Chamber of Commerce of the United States. In an address before the annual convention of the American Trade Association Executives, Dr. Baker pointed out that the public has little or no conception of the constructive work in the public interest being carried on by industries through their trade associations and consequently the public is sometimes antagonistic to trade association effort.

"Many of the great corporations of the country," he said, "have come to appreciate the fundamental necessity of having right relations with the public. Specialists of various kinds are in the employment of these corporations to promote this work. Here is a legitimate function which might properly be undertaken by the trade associations of the country, even in industries where corporations are now spending large sums of money for the development of better public relations.

"There are many ways by which a trade association executive can carry on activities that would not only sell his association to the members but to that particular section of the public which the industry is trying to reach. It would seem at times that some associations have literally built a fence around their activities and feel themselves too busy to pay any attention to anything outside the fence or in fact to appreciate that there is a world of imporance to them beyond the limitations of the fence which they have erected. There have been cases where the fence has fallen in and both the manager and his association have been crushed out of existence."

Less Active Demand in Indianapolis

INDIANAPOLIS, Ind., October 8, 1928.—Some spottiness is apparent this week in the paper trade. Taken as a whole the volume is hardly as great as it was a couple of weeks ago. The mills in this state report a good business and most of them are producing in rather more than average volume for this season of the year. The mill business runs largely, it appears, to heavy cardboards for containers, straw boards and wrapping papers, all of which are selling better than a month ago.

The paper bag business also is moving along nicely, with an ever increasing demand and also several indications toward stronger prices. Local jobbers report a good demand for glassine products, much of it coming from the confectionery trade and quite a bit from the tobacco trade. And this business is expected to show an increase during the next month at least, while these two big industries prepare for their holiday trade. Much the same thing applies to tissue papers, though the demand is not nearly so marked.

A good demand is seen for fine papers used particularly for advertising and in specialties. The campaign has had much to do with this, for here in Indiana it is becoming more active than for years and more advertising is being done by the candidates. The department stores are not such large users just now, but another month or six weeks will see them in the market in preparation for the holiday trade. Little demand is seen for paper stock, though prices are holding firm.

To Open New Factory at Davenport

The White & Wyckoff Manufacturing Company, of Holyoke, Mass., has announced the acquisition of a Western plant located at Davenport, Iowa, where they will immediately begin manufacturing a full line of writing tablets, and, at an early date a popular-priced line of papeteries.

The property is a large one story building, with ample land for future growth, and is served by four of the great Western trunk lines of railroads, and by the Mississippi River boat lines. The new plant is being established at this strategic point in the West to make possible closer business relations with their large number of friends and customers in this vast territory.

This extension of the company's manufacturing facilities, however, does not contemplate a curtailment of their Holyoke business, but rather an enlargement of their activities there in conjunction with the new location in Davenport.

Their Western plant will be managed by Western men who are thoroughly familiar with conditions in this territory and who have the Western point of view as to lines and distribution. The personnel will include their vice president, Peter Peterson, who has had wide experience in manufacturing and selling stationery. His office and sample display will continue to be in Chicago, where he will have direct contact with and supervision of their Western business. Harry F. Burkhardt, who has a wide acquaintance and experience in manufacturing and selling, will be local manager of the factory.

W. J. Maiden, Carl Peterwitz, C. A. Warner and Harold Peterson, for many years representatives of the company, will continue in their capacity of selling representatives, for the products of both plants. The company's executive board at Holyoke with their thorough knowledge of the stationery manufacturing industry, will govern the financing, advertising, designing and general policies of both plants.

It is expected that the Davenport plant besides giving a larger, nathion-wide distribution of the White & Wyckoff products, and expediting quick deliveries to all large business centers, will also call for a greater output of all their lines.

Davenport is the geographic and manufacturing center of fifty million people—a progressive city about the size of Holyoke—and has been frequently referred to as The Heart of the Great Central West.

The Eastern and Western plants of the company will supplement each other in the development of a nation-wide distribution of their complete line of social stationery, greeting cards, writing tablets, typewriter papers, envelopes and paper specialties, and the obvious advantages of this larger distribution will be reflected in their offerings to the trade.

It is expected that the new plant will be ready to manufacture and ship goods within sixty days.

Boston Paper Market Steady

BOSTON, Mass., October 8, 1928.—Conditions in the paper market here are encouraging, with all lines moving, although some regard the amount selling as no better than fair. One dealer reported the market as listless. The market generally is steady, with prices unchanged. Business in box board has been good, box manufacturers placing orders in considerable volume.

The tendency in old papers is now upward with all grades at least firm. White blank news is quotable at 1.65 to 1.70, compared with a former price of 1.55 to 1.65. Old newspapers are in good demand and very strong at .70 to .75. A number of Western firms have recently come into the market to buy old newspapers, tending to advance the price, which was around .65. Bagging and rags are steady. Scrap sisal for shredding is firm at 1.60 to 1.70.

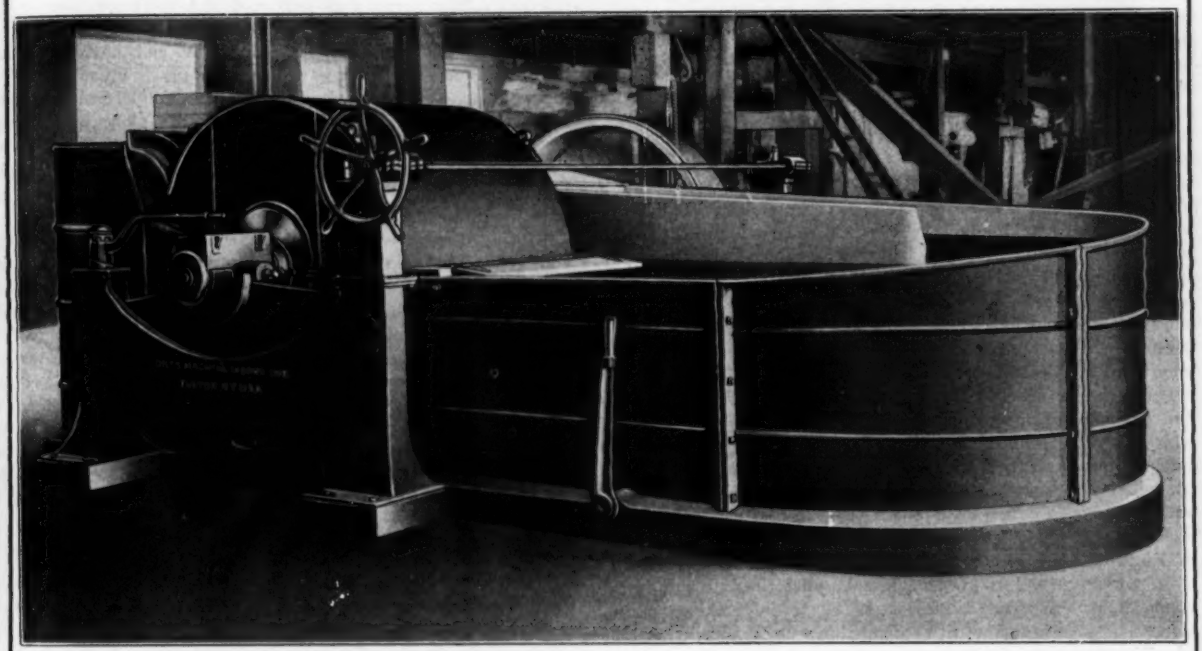
The twine market is steady, jute twines particularly so. Cotton polished twines are stiffening. There seems to be a trend towards using coarse yarn polished cotton, which apparently gives as good service as the fine yarn and at a lower price.

"Your Paper is Made in your Beaters"

NEW TYPE

HIGH DENSITY

BETTER CIRCULATING



THE PROBLEM is "how to beat *more* stock into *better* quality with *less* cost for labor and power."

THE ANSWER is "the Dilts New Type, High Density, Better Circulating Beater, built with high tub and with the roll located toward the rear end."

We can rebuild your beaters to our NEW TYPE design.

Dilts
MACHINE WORKS, Inc. FULTON, N.Y.
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"Your Paper is Made in your Beaters"

Technical Men and the New Competition*

By D. C. Everest [1]

I have been asked to say something of the problems confronting the paper and pulp industry in America. The stories which come from the various branches of the industry are much alike. Barring a little variation in detail they all complain of overproduction; of business upset through substitution of new products; of uncontrolled production from new localities; and a dozen and one other things which are only the result of progress in the industry on the part of some person or corporation.

Difficulties of the Paper Business

If I were asked to place the blame for all the difficulties of the paper and pulp business from the beginning of time on down to date, I would say that potential "Technical Association" members, superintendents or production managers, governmental agencies such as Forest Products Laboratories, and machinery and equipment builders have been directly responsible for all the disturbing factors in the business in former years and the conditions have not changed today. It's the same gang who make it hard for management. If you think the old boy who ran a stone quarry for the production of tablets or the fellow who made lead and brass stationery had an easy time of it after the introduction of papyrus, you are wrong. I think it was Pliny who said "the remembrance of past events depends upon papet; with the irony of fate, paper has failed to record its own origin, and much of the early history of the art is left to conjecture" but we do know that it has been just one substitution of processes, materials and equipment after another. Minton and Mason are but living examples of the trouble that may be raised in an industry.

I am a lover of old books, some for their wonderful bindings and examples of the printer's art, others for the fine papers on which they are printed and others for the printed word and the valuable information which they contain. For instance I have a book in my library which deals with Greek and Roman weights and measures, products and imports, the use of money and the high cost of living. All this is described by Charles Arbuthnot of England under date of 1727. He refers to Alexandria as the Chief of Cities and states that Josephus described it with great pomp, telling us that it yielded to Rome in nothing, except bigness. "It sent many rich commodities to Rome, as cloaths of all sorts, especially linnen, spices, paper, glass, hemp, magnificent Robes." You will note Josephus placed paper third in importance of Alexandrian exports, but where, by the way, does Egypt rank in paper production today? Not one pound is made there. Good business upset by the activities of some Tappiarians of ancient days.

Early Paper From Wood

I also have another book which was printed in England in September of 1800. My copy is autographed by the author Mathias Koops. I prize it very highly as it is printed on paper made solely from straw and contains an appendix printed, as the author states, "on paper made from wood alone, the produce of this country, without the intermixture of rags, waste paper, bark, straw, or any other vegetable substances, from which paper might be, or has hitherto been manufactured; and of this the most ample testimony can be given, if necessary."

It is not a beautiful book but to those who are interested in paper it contains much which is of interest. Koops' predictions as to future uses are remarkable, when you consider they were made 128 years ago. I am taking the liberty of quoting from this book such portions as I believe will interest you. You will note that all of Koops' statements and predictions are made with the customary self-assuredness of an up-to-date Tappiarian.

Koops' Introductory Statement

His introductory statement relative to paper and papermaking is one which I do not believe could be improved on. He states.

"The art of papermaking ought to be regarded as one of the most useful which has ever been invented in any age or country; for it is manifest, that every other discovery must have continued useless to society, if it could not have been disseminated by manuscripts, or by printing. Scientific men, who were neither artists nor manufacturers, have, by means of this invention, been enabled to communicate their projects, which mechanics have afterwards improved and perfected, and by this means enriched the commonwealth.

"Without the use of paper, geography and navigation must have been very incorrectly understood; the beautiful charts of the ocean so accurately laid down have established our commercial intercourse with every part of the globe with safety; at the same time that the delineations upon maps of places, rivers, and countries, are now so correct, that they enable a traveller to proceed without danger, and even predict, with certainty, the time it will require to convey him to any part of the globe.

"It may be asserted, indeed, of this country, that its grandeur and commercial dignity have been greatly exalted by the invention of Paper; for it is presumed that the superiority which distinguishes the manufacturers of this Island, chiefly depends upon the liberal publications concentered from all the rest of the world, which have so greatly increased in latter years, and which are likely farther to be augmented. It is, in short, the reputation of the goods fabricated in Great Britain, which has elevated it to the splendor and fame it now possesses, in the scale of nations, and enables it to monopolize the trade of the universe. — All these are benefits which have flowed from the invention of Paper, and which have so largely contributed to the present flourishing state of the country.

Savings Made by Paper

"What infinite trouble and labor, what a fruitless consumption of time has not been saved by the knowledge of paper: how many laborious and dangerous experiments have not philosophical projectors been spared: what labor of investigation and study have not been abridged by the events which the experiments of others have handed down to posterity: thereby affording to the present age a body of information more than adequate to the knowledge any one man could have attained to in a thousand years, with all his faculties.

"This reflection alone must fix such an impression on any thinking mind of the invaluable utility of Paper, as to render any farther commendation unnecesary; but, in short, the invention of Paper has been the sole cause of the various graduations of improvement in every art and science. Without it the present age would neither have been more civilized nor wiser than it was many centuries ago, because one age could never have conveyed to its posterity what the labors of the past had achieved; for it is well known that, in dark and barbarous ages, the inhabitants of no country have ever made any progress towards improvement and civilization without the use of writing, printing, and paper; and it seems very probable, that the early knowledge of this article amongst the Chinese has been the cause of these acquirements which have distinguished that truly wonderful nation: for it may be affirmed, that in proportion to the quantity of Paper consumed, by any stated number of inhabitants in literary pursuits, so will be their comparative information, civilized state, and improvement.

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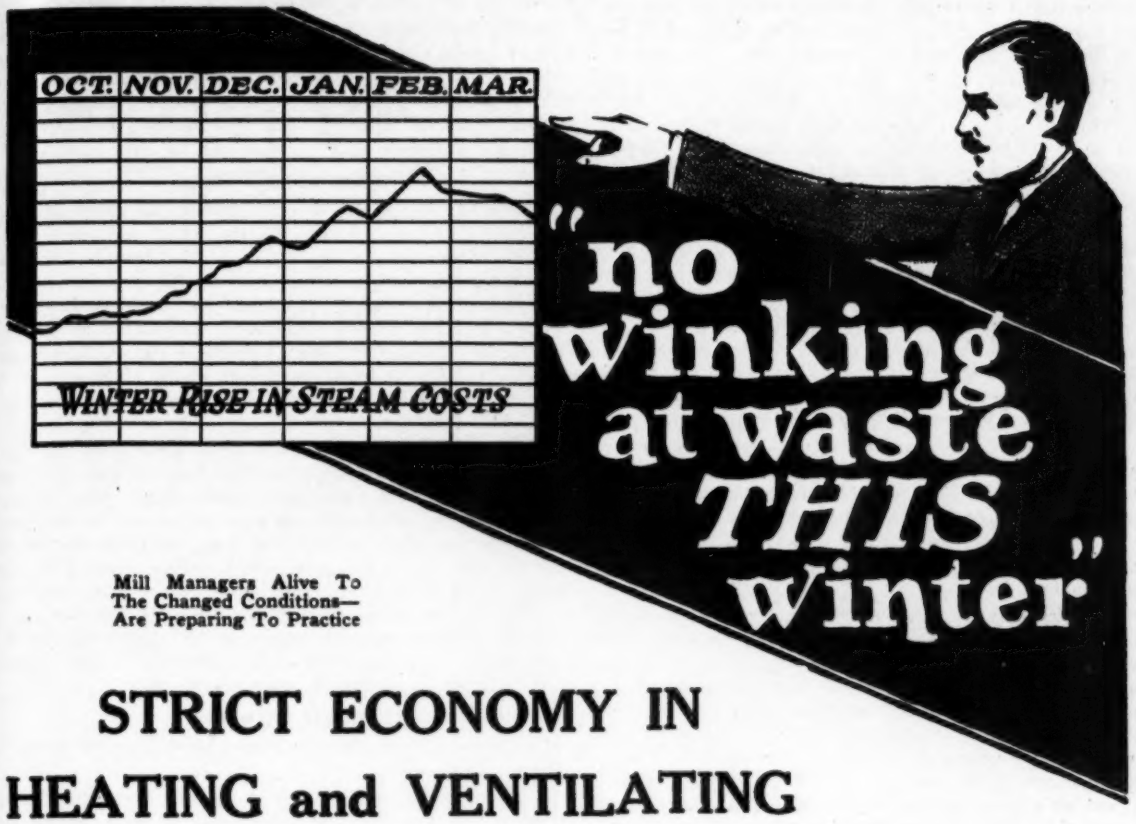
* Address given at Fall Meeting of TAPPI, Wausau, Wis., Sept. 26, 1928.
[1] Member TAPPI. President of the American Paper & Pulp Association.



Mill Managers Alive To The Changed Conditions— Are Preparing To Practice

STRICT ECONOMY IN HEATING and VENTILATING

Easy come—easy go methods are done with. Every leak must be plugged. Waste utilized wherever possible. Times have changed.

The cost of operating the Heating and Ventilating apparatus is being carefully checked. Steam costs are being scrutinized. Inefficient apparatus discarded.

Profits this winter will come out of lowered operating costs and utilization of waste.

- Briner Economizers
  Licensed under patents of E. A. Briner and John E. Alexander.
- Ross-Grewin High Pressure Vapor Removal.
- Ross Grinder Exhaust System.
- Ross Heating Systems for Finishing, Beater and Storage Rooms.
- Locker Ventilation.
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- Calender Cooling.
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This industry-wide movement toward increased efficiency and less waste is already indicated by the active interest in Ross Heating and Ventilating methods and apparatus on the part of the mill managers from every section of the industry.

Whatever your desires or problems in the direction of lowered operating costs, the specialized experience of Ross engineers can prove helpful to you. Their knowledge and experience is at your service.

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ROSS SYSTEMS
HEATING—VENTILATING—DRYING

Papers Uses Unquestioned

"To enumerate all the various advantages which the invention of paper has afforded mankind, could not be contained in an essay of this nature: its uses are unquestionable; and the important services it has yielded to all countries where it has been employed are not to be calculated; it is sufficient to say here, that the growing youth are educated with facility in the principles of their duty, and barbarous states have been softened and enlightened by means of this discovery.

"Although this subject might be much enlarged upon, the intention of this address is most humbly to present to Your Most Gracious Majesty the first useful paper manufactured solely from straw, and on which these lines are printed.

"From the remarks which have been already made, every person must be convinced, that it is of the utmost consequence to prevent the scarcity of the materials from which paper is to be fabricated. Although cotton has been likewise used for this purpose, paper-makers in this country have depended on linen rags for the regular pursuit of their employment.

"All Europe has of late years experienced an extraordinary scarcity of this article, but no country has been so much injured by it as England. The greatly advanced price, and the absolute scarcity, equally operating to obstruct many printing-presses in this kingdom; and various works remain, for these reasons, unpublished, which might have proved very serviceable to the community.

"The great demands for paper in this country have rendered it necessary to be supplied from the continent. This supply is extremely precarious, and is likely to be more wanted, as the consumption of Paper increases, because the material, which is the basis of Paper, is not to be obtained in England in sufficient quantity. The evil consequence of not having a due supply of rags has been the stoppage of a number of paper mills; for it is a manufactory which requires numerous hands (of men, women, and children); a great number of whom have been thrown upon their respective parishes for want of employment. A still more important consideration, in the view of commerce, presents itself, when the raw material comes from abroad, because the importation of it is paid in hard cash, the preparation of which might have employed numbers of idle hands at home advantageously.

Substitute for Linen Rags

"These reflections induced me to make various experiments, with a view to remedy, in some degree, this evil; and, after many trials, I have the satisfaction to remark, that I have discovered a substitute for linen rags, which has been heretofore unknown, and which will merit the attention of the public. This discovery is the Art of extracting Printing and Writing Ink from Waste-Paper, whether in small or large pieces, obliterating the ink, and rendering the Paper perfectly white, *without injuring the texture* of the regenerated Paper, and of a quality as good as it originally was, for the purposes of writing and reprinting.

"It is worthy of the directors of families to order their servants to save all the waste white paper, such as letters and old writing paper, which are generally thrown away or burnt, and regarded as of no consequence; for, should this be attended to, very considerable quantities would be collected, and large sums of money saved, which are now expended in foreign countries for Rags; because, if we calculate that Great Britain contains fifteen hundred thousand families, and that half a sheet of paper should be daily saved in every family, it would produce four thousand four hundred tons, (a ream or five hundred sheets being calculated at 18 pound weight) which is about one-third of the quantity of Rags which have, of late, been converted annually into Paper in this country; whereby near two hundred thousand pounds would annually remain in this country, which sum is now sent abroad for the purchase of Rags; and eighty-two thousand one hundred and twenty-five pounds would be saved from fire and destruction, calculating a pound of old Paper torn into pieces at two-pence."

Koops continues to discourse at great length on what might be done in England to conserve waste paper, rags and other materials suitable for paper making. He contends that the greater part of the English families live more comfortably than people in other countries and give but little thought to saving rags which are of so little value.

A Curious Observation

One curious observation is made in which he commends England for its saving of linen. "By the act of parliament, which prohibits, under penalty, the burial of the dead in any other dress but wool, may be saved about 250,000 pounds weight of linen annually; which in other countries perish in the grave," and in a foot note gives the basis of his computation as follows—"Calculating that out of thirty persons living, on the average, one dies annually, and that one pound weight of linen might be used at every burial, and the number of inhabitants seven millions and a half."

Koops cites numerous authors of prior publications and states that as cotton, flax, and hemp, are the origin of paper and rags, other vegetables of a tender and pliable nature might probably be converted into a mucilaginous pulp and adopted in the manufacture of paper; and farther that those vegetables that are of a brittle and harsh nature, but which can be obtained in large quantities and at moderate prices, might by art and perseverance be made tender, without that quality which is necessary to be retained in paper-stuff. He states that he is surprised that this work should not have been earlier attended to by scientific men, or rather by intelligent paper-makers.

Future of Straw Paper

His comment on the future of straw paper is contained in the following paragraph—

"I flatter myself that these exertions will meet with the approbation and support of the community at large, as the discovery will prove of great national benefit; it will increase the revenue; it will employ numerous hands of both sexes and of all ages; it will prevent the necessity of so much money being sent to the continent, for the purchase of rags; it will increase the value of land; and it will ultimately reduce the price of paper. And if the manufacture of Paper from straw alone should be only serviceable for pasteboards, packing-paper, and paper hangings, it is hoped and believed that this country will thereby be enabled to provide the latter article to the *whole world, at a lower rate than it is possible to manufacture it from rags.*"

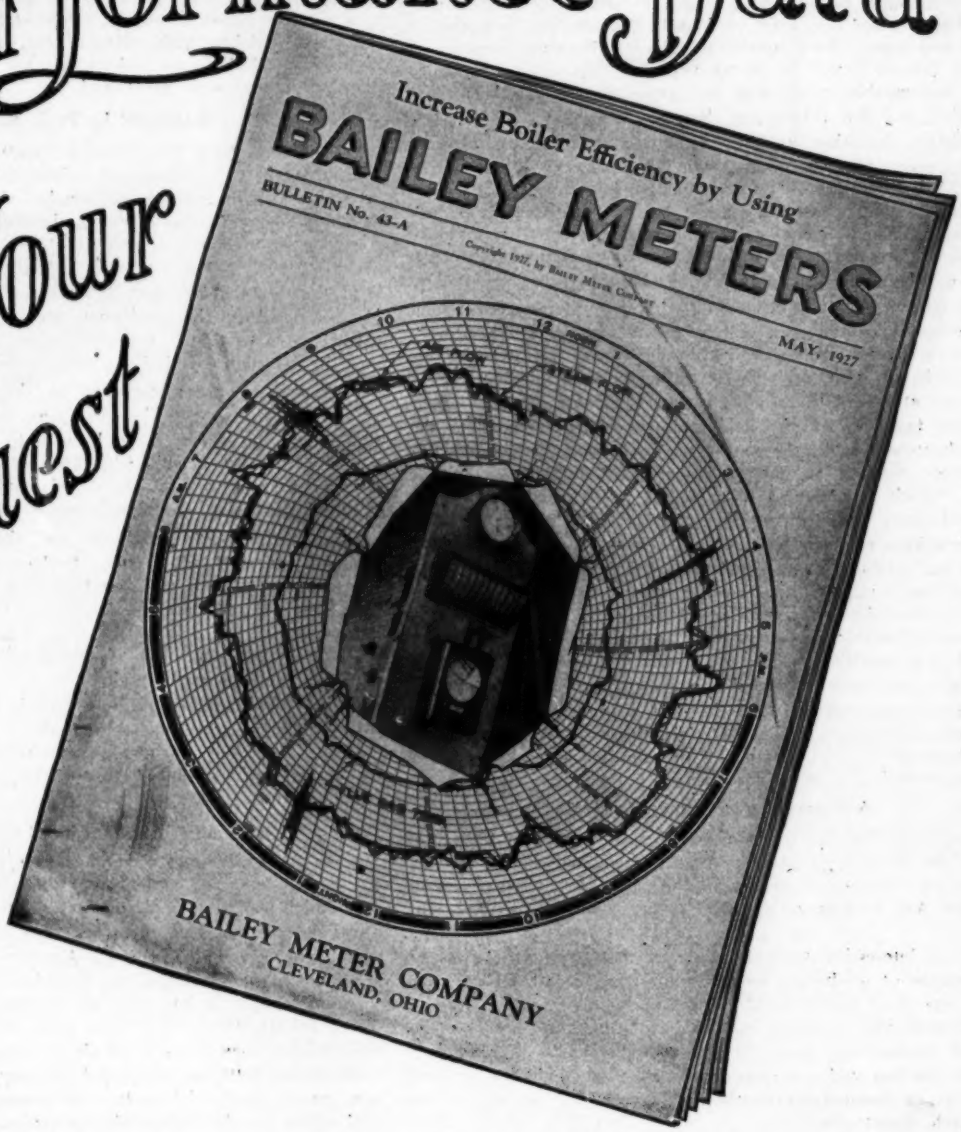
Safety Paper

Koops also had the advance idea of a safety paper as evidenced by the following paragraph—

"And it would be productive of the greatest satisfaction, if, by farther experiments and researches, I can accomplish the object I have in view, namely, that of manufacturing Paper from vegetables, for the purpose of making bank notes, which I flatter myself I shall be able to effect. A discovery of such description must be a source of great and pleasant reflection to every philanthropic mind, since the opportunities of forgery on the Bank of England, which at present exist, will be immediately done away, and the public mind relieved from hearing of such crimes, and of the executions which ensue from the conviction of the offenders. That such will be the good consequences resulting to the community, from manufacturing Paper of the said materials for the before-mentioned purpose, must be manifest, because the mixture of vegetables from which the Paper would be made might remain a secret, if the necessary measures for that purpose are adopted; consequently no forgery could henceforth be committed on the Bank, as long as such paper should be used in making bank-notes, because the counterfeiting of the Paper cannot take place, as long as the materials from

Performance Data

at your request



This new bulletin gives performance data concerning the Bailey Boiler Meter which records Steam Flow, Air Flow and Flue Gas Temperature. It tells of numerous instances where large savings have been effected by the use of Boiler Meters in industrial plants as well as central stations.

The bulletin contains chart records which have been reproduced in color to show the kind of boiler operation obtained before and after the installation of the Steam Flow, Air Flow guide. This information, together with test data and cost figures showing the actual savings in fuel consumption, labor and additional boiler units will be of interest to you.

Write for Bulletin No. 43A.

Bailey Meter Company

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Bailey Meter Company, Ltd., Montreal, Que.

which it is made is unknown, and as long as the Patent granted by His Majesty is in force."

Paper Made from Wood

His comments on paper made from wood are even more interesting.

"Having thus far succeeded in my researches, to make an useful Paper from one kind of Wood, I doubt not, but, that I shall find many others equally eligible for the same purpose, of which I trust it will be in my power, within a few weeks, to give indisputable proof that my expectations have been well founded, and that I have not cherished a visionary opinion.

"History furnishes us with numerous examples of one discovery giving birth to others, and, if my success of having encreased the quantity of Paper materials, by rendering these applicable to that which have never been before applied to such a purpose, should incite active and industrious artists, to make farther improvements in their various manufactures, my feelings will be amply gratified. Various hints may be suggested to those who are already acquainted with the properties of Paper, when pasted in lamina on each other; it may, by this means, be made to form a substance, as durable and more impenetrable than oak. It may probably be ultimately proved, that Paper thus prepared, will be a lighter, neater, and more durable covering for buildings of all kinds, and it is equally true, that the ingredients with which the cement can be composed, will render this substance not only incombustible, but more durable than slates, tiles, (which in course of time become brittle) and wood in its natural state, and incorruptible by insects. Who can say that coach-makers, chair-makers, and cabinet-makers, will not make use of it for carriages, chairs, and elegant household furniture, and reflect that a substance possessing such superior properties ought to be preferred; having flexibility, hardness, and capability of being worked with infiinite greater neatness and lustre than wood, which is so much affected by the air and weather."

When you consider that this statement was made by a man engaged in scientific research in 1800 one must admit that the thought of the use of new materials, the lowering of costs, the development of new uses and all the other problems with which we are wrestling is not a new one.

A Forerunner of Hundreds of Men

Koops was but the forerunner of hundreds of men who have upset the business of paper making through useful contributions to the art. He actually made a sheet of paper from wood alone and we are still working on the suggestions which he made at that time.

It is interesting to note, however, that greater progress in the matter of production has been made in the last fifteen years than any prior period of fifty years or more.

Research and technical control have been recognized as the sound fundamental basis for the continuation of the industry. Some one has said that the soundness of any industry or business is in direct ratio to the intelligence and activity of its research department.

I recall distinctly the early efforts of gentlemen connected with the industry to form a Technical Association. On February 19, 1915 the first meeting for organization purposes was held in room 115 at the Waldorf-Astoria Hotel in New York. This meeting was the result of a suggestion made by Henry E. Fletcher of Alpena, Mich., at a meeting of the Wrapping Paper Division held in Chicago a few months before.

The meeting was in charge of H. H. Bishop then Secretary of the Wrapping Paper Division and in his opening remarks he stated: "This is a meeting, gentlemen, called for the purpose of discussing the advisability of forming a division of the American Paper & Pulp Ass'n to be known as the Technical Division, or by such other name as you may in your wisdom think best."

Henry E. Fletcher was made Chairman of this meeting and he later introduced Prof. Ralph H. McKee, who outlined the possibilities of such an association. Prof. McKee referred to the work of the Forest Products Laboratory and dwelt particularly on the necessity for use of new species of pulpwood. He stressed the fact that some mills were beginning the use of tamarack, jack pine and Douglas fir and other similar woods as pulp material. He referred to the use of annual plant growths as a possible source of supply. Pulp mill waste and particularly that from Sulphite mills came in for a prominent part of the discussion. Methods of cooking, the use of dyestuffs and other items of interest were mentioned.

Statement by Prof. McKee

Prof. McKee made the following statement. "It has often been said 'that there is active and substantial cooperation in every interest which in any manner touches the production and consumption of paper, except among the manufacturers themselves.' The formation of this Division promises more toward a change from the condition given in the quotation I have just read, if it is a true statement, than any other step that could be made. Men engaged in the production and scientific phases of mill work have much to gain and at no injury to the mills they represent, by attendance and discussion at such meetings."

Four subjects were suggested as the basis of work to be promptly undertaken. The *first* was stated as follows—"The paper manufacturer needs to be able to tell from a sample of a pound or less of pulp, what kind of paper it will make, or whether in a given furnish, it will serve to give the desired standard of quality of paper."

Second: Standard definitions for the different grades of bleached and unbleached pulp. Perhaps with this should go a standard or definition of over-bleaching, as the evil effects of over-bleaching on paper are but rarely fully appreciated by the pulp maker.

Third: A new unit for purchasing pulpwood. Today wood is expensive and accuracy needed.

Fourth: A discussion of the use of by-products.

He also stressed the establishment of a library containing a complete collection of books and periodicals on pulp and paper manufacture which might be loaned to members throughout the United States.

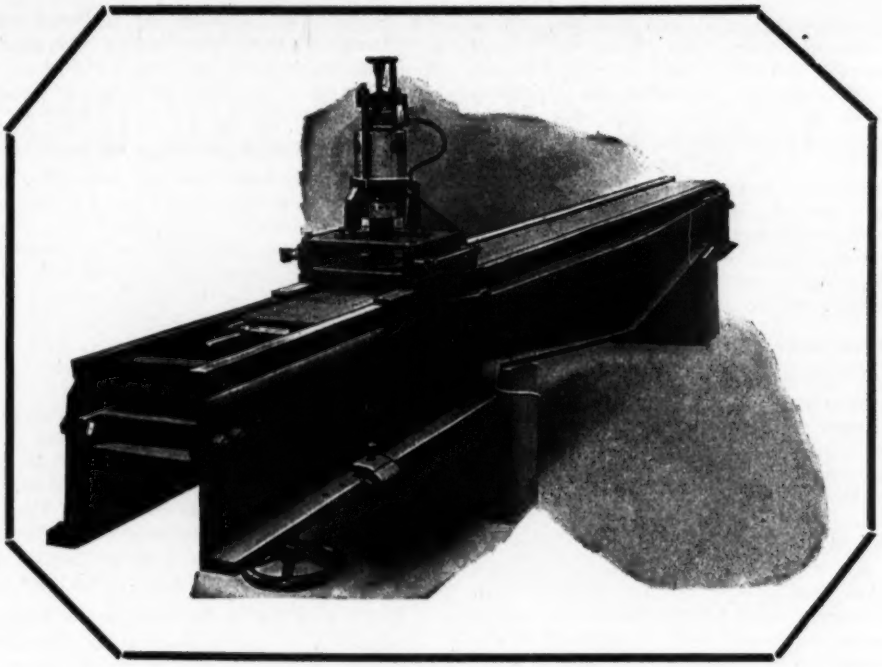
Beginning of a Wonderful Organization

From this meeting of thirty men largely made up of mill executives we have the beginning of this wonderful adjunct of the pulp and paper industry. You are all familiar with the development and extension of the work of your Association over the past thirteen years. I believe it has far outrun the fondest expectations of the gentlemen who helped to organize it.

In my opinion it has not only proven of great value in the direct results which have been given to the industry but has served as an inspiration to all those connected with the industry in perfecting better processes and equipment for increased production, standardization of product and consequent lowering of costs.

Members of the Technical Association, superintendents association, governmental agencies, and the engineering staffs of machinery and equipment builders have combined to bring about the greatest increase in production per man employed ever known in the industry.

You fellows are responsible for the difficulties of management today in having to deal with the very serious problem of overproduction. Given a combination of cooperative brains in the production and scientific end of the business, coupled with cheap money and the desire on the part of capital and management to secure such remaining natural resources as are available in power and pulpwood for their future use and you have a set up which will bring about an over-production in any industry. It is this difficulty which we are facing today. Whether management urged you to do these things or whether you far outran management in your ability to make "two blades grow where one blade grew before" is not for me to decide and is probably not important, but



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With the Valley Suction Box Planer an operator can accurately and quickly restore an absolutely true surface to the box—without delay—without variations—without time and labor involved in hand planing.

The Valley Suction Box Planer requires little space—the planing device proper is portable—a single compact unit—requires only electrical power for operation. Its convenience and accuracy will enable your workmen to plane down the box to its minimum useful thickness.

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nevertheless cooperative effort has put the pulp and paper industry on a tremendously increased basis of production on a lower "pounds of material used" basis than ever before. What we need now is to have from some source an equal amount of technical knowledge expended on the development of new uses and the finding of ways to utilize the great quantity of product now available. Perhaps it is unfair to ask those who have built up this gigantic productive machine to find uses for the results of their efforts but such a solution of the present problems will prove of greater dollars and cents return than seems possible in further reductions of cost of production. I am not advocating the discontinuance of your efforts but I am throwing in this suggestion for your benefit, merely to indicate where the money lies.

A New Order of Technicians

I believe we have need today for a new order of technicians, and the new paper engineer or whatever you may call him will not, in any way, supplant the technical man as we know him. Both have their place in the industry but it would be far better if these new men were drawn from the ranks of the present technical staff in view of their knowledge of the manufacturing end of the business.

We need men who will devote their time and attention to the development of new uses of pulp and paper products. We have a potential manufacturing capacity of twenty five percent of our present annual output now unemployed. Two and one half million tons additional of paper and board could be produced in this country with present equipment if suitable uses could be found for the product. Take in the production of pulp, there is a possibility of a saving in wood and chemical costs, maybe some slight saving in power and steam, but take it all together and depending on location and present costs, it cannot mean more than three to six dollars in cost per ton, but look at the possible profits to be gained by increasing the uses of paper. The advent of a certain type of bag a few years ago saved one branch of the industry from a large over production or at least a greatly reduced operating time. Such efforts should be duplicated. The new technical man will need to know the use requirements of consumed products. What are we trying to make and for what purpose?

People who convert paper into various products are usually not connected with the manufacture of the papers in any way, hence the great number of developments which are retarded or fail due to improper selection of material.

Tremendous Productive Capacity

In this country we have built up tremendous productive capacity. Capacity or production without profit is of no benefit to anyone. As I see it today we have two profitable ways out of this dilemma.

One is to so change existing laws as to permit reasonably controlled operation of plants, limiting production as may be necessary to meet the actual demands of the country as shown by statistics carefully compiled by group associations and thus maintain the operation of all industry on a profitable basis ensuring to employees continuity of employment at a good wage per period and to capital, a return for its investment.

This plan calls for legislative action and may mean a long campaign of education before it can be brought about. Some decisions of courts seem to point to a more practical and common sense application of existing laws to present business.

It may only require the hearty cooperation of every producer in an industry to develop information which will enable each one to so handle their individual business in a way which will not flood a market. Such cooperation seems some distance away and until such time as these remedies are effective we should use our best efforts to meet the situation by the Second plan, which is to develop new uses for our products.

Perhaps a combination of the two is the logical solution. We must have the support of every manufacturer in our trade association activities. We must have complete statistical data of production, sales and stock on hand. With such information intelligent management should have no difficulty in regulating the amount of production which is placed on the market. Concurrent with such effort the work of development of new uses should be pushed to the limit.

Too Much Effort on Production

The trouble with the paper and pulp industry is that we have expended more effort on production than on distribution. Until such time as we balance this situation either by curtailment to allow distribution and the normal increase in consumption to catch up with productive progress, or by increasing the use of paper products in order to take up the slack in productive capacity, we will continue to hear of over production and profitless prosperity. No industry has an organization comparable with TAPPI and no industry has a better technical staff on which to draw for suggestions as to new uses.

There is no criticism of the sales efforts which have been made or of the salesmen who represent the mills. Many of the new uses for paper have been developed by the sales force. But in this uncontrolled, wide open cut-throat competition of the present day, salesmen are under stress to get orders. They have no time to develop new uses. The battle is between salesmen and purchasing agents, and usually there is a woeful lack of knowledge on the part of both as to the requirements of the paper or board involved.

Price Is the Determining Factor

The mills of the future which are to show profit will be those which give attention to making special papers for special purposes.

In such work you gentlemen will necessarily play a very important part.

Big Job of the Technical Man

The determination of variables in every process and machine operation is the one big job of the technical man.

Without such information the making of special papers for special purposes will remain a more or less "rule of thumb" proposition. I look forward to a constantly increasing cooperative effort between technical and operating staffs, with the operating staff depending on technical control of the mechanical and chemical processes of the industry. Such a situation, coupled with the use of suitable technicians in cooperation with the sales force in the development of new uses and the distribution of the product will bring about a condition of profitable operation, subject only to the intelligence of management in regulating output to meet the unchangeable law of supply and demand.

I wish to congratulate you on the wonderful success of your association work and I fully believe that the results of future years will prove that you have only begun your real contributions to the art of pulp and paper manufacture.

Finnish Paper Markets

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 26, 1928.—Paper markets in Finland have been characteristically dull during the summer months, but it is notable that still available supplies are bringing better prices than hitherto, says Vice Consul Tolman, at Helsingfors.

Paper shipments by the three principal exporters during July totaled 21,460 metric tons and for the first seven months of the current year 149,910 tons as against 140,884 tons for the corresponding period of last year. At the same time all of this year's sulphite and sulphate have been sold and Finnish mills have succeeded in placing most of the 1929 output as well. Small quantities of ground wood remain unsold, but sales for the 1929 output are progressing slowly. Exports of chemical pulp by the Finnish Cellulose Union during the first seven months of this year totaled 265,042 tons and of ground wood by the Finnish Wood Pulp Mill Union to 90,400 tons as against 187,937 tons and 64,657 tons respectively during the first seven months of last year.

A GOOD MILL DESERVES A GOOD ROOF

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The average life of an untreated Wood Roof Deck on a Paper Machine Room is 8 years.

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CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Woronoco, Mass.—The Strathmore Paper Company, Mittineague, has completed plans for the construction of a new four-story addition to its mill at Woronoco, to be 45 x 200 ft., reported to cost close to $175,000, including equipment. General building contract has been let to L. S. Wood, Stockbridge street, Springfield, Mass.

Cincinnati, Ohio—The Container Corporation of America, 5500 Eastern avenue, manufacturer of corrugated paper containers, fiber boxes, etc., has awarded a general building contract to the Rust Engineering Company, American Bank Building, Pittsburgh, Pa., for proposed new addition to local mill, two-story, 175 x 300 feet, reported to cost more than $150,000, with equipment. The Devore Company, Nicholas Building, Toledo, Ohio, is architect.

Pittsburgh, Pa.—The Whitaker Paper Company, 101 Ninth street, has commissioned R. Maurice Trimble, Commonwealth Annex, Pittsburgh, architect, to prepare plans for its proposed new storage and distributing plant on site recently acquired at Beaver and Western avenues, to be one-story, concrete, about 140 x 540 feet, to cost close to $200,000, with equipment. It is understood that bids will be asked on general contract at early date.

Saginaw, Mich.—Charles Bothwell, Inc., recently organized with capital of $20,000, is reported planning operation of local factory for the manufacture of paper specialties. The new company is headed by H. D. and Charles Bothwell, 826 Howard street, Saginaw.

Andover, Conn.—The Case Board Company has authorized plans for rebuilding of portion of its local paperboard mill, destroyed by fire a few weeks ago, with loss reported at close to $75,000, with equipment, and will proceed with work at an early date. Reconstruction is expected to cost approximately amount of fire loss.

Oakland, Cal.—The Sunset-McKee Sales Book Company, manufacturer of commercial paper products, is having plans drawn for a new plant on Livingston street near Cotton street, to be one-story, 160 x 200 feet, reported to cost about $75,000, with equipment. Ellison & Russell, Pacific Building, San Francisco, are architects.

Watertown, N. Y.—The Taggart Corporation, operating the Taggart Brothers Company, Inc., Taggart-Oswego Paper and Bag Corporation, and Champion Paper Corporation, has disposed of a block of preferred stock to total $2,050,000, and common stock to an amount of $1,625,000, a portion of the proceeds to be used for general operations and expansion. The Taggart-Oswego Company has work in progress on a new mill and expects to have the unit ready for occupancy at an early date. Upon completion, the companies will have a gross output of more than two million paper bags per annum.

New York, N. Y.—The Star Corrugated Cap and Liner Corporation, care of Samuel H. Sternberg, 135 Central Park west, recently organized, is said to be planning early operation of local plant for the manufacture of a line of corrugated paper goods.

Muskegon, Mich.—The Michigan United Paper Company, recently organized as a branch of the United Paper Company, East Braintree, Mass., has completed remodeling and improving of the former local factory of the Muskegon Extract Company, and will develop capacity operations at an early date. Machinery has been installed. The new company has arranged for the purchase of its raw paper requirements from the Central Paper Company, Muskegon. John J. Emery, Jr., Muskegon, is secretary.

Tuscaloosa, Ala.—The Gulf States Paper Corporation is pushing construction on its new local plant for the manufacture of kraft paper goods, and is understood to be planning operation of initial units at an early date. The entire project, including pulp and paper departments, is expected to cost close to $5,000,000, with machinery.

Manchester, Conn.—The Colonial Board Company, manufacturer of paperboard products, has completed plans for the construction of a new addition to its mill in the Parkerville district, to be one-story, brick, 30 x 75 feet. General building contract has been let to Whitmore & Miller, Manchester. Estimated cost has not been announced.

Chicago, Ill.—The American Carton Corporation, 4936 South Rockwell street, will proceed with construction of a new one-story plant addition, 80 x 211 feet, for which general building contract was let a few weeks ago, and proposes to have structure ready for service at early date. It is reported to cost close to $40,000, with equipment. T. B. Jorgensen, 510 North Dearborn street, is architect.

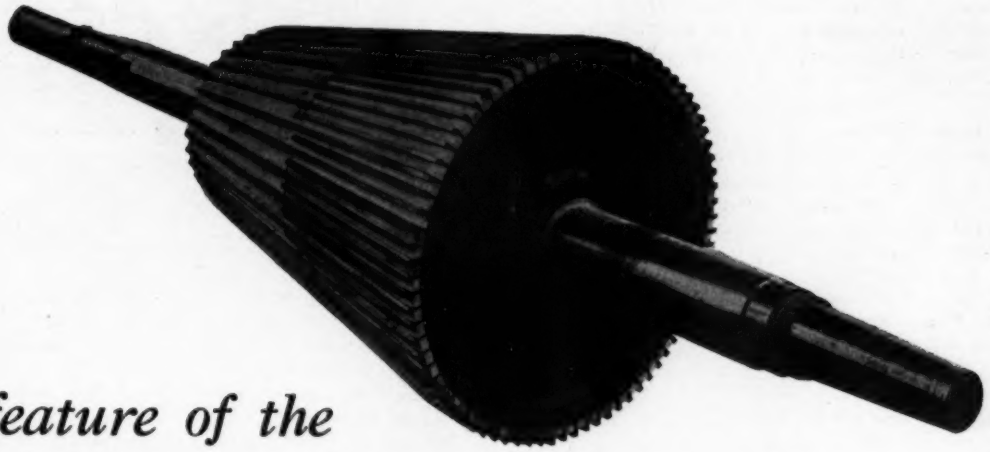
St. Petersburg, Fla.—The Southern Safety Match Company, care of James E. Coad, Sarasota, Fla., recently organized by Mr. Coad and associates, with capital of $200,000, has acquired property at St. Petersburg for new plant and in connection with factory plans operation of paper unit for production of paper match stems and cards, and will develop extensive capacity. At a later date, the company purposes to construct additional units to develop an output of approximately 100,000 cards of paper matches per day.

Harrisburg, Pa.—The Harrisburg Paper Box Company, Vernon street, is running on a capacity schedule with full working force and is said to have booked orders for more than one million box units for delivery before the close of the present year. Maximum output will be continued for an indefinite period. W. J. McClintock is president.

Antioch, Cal.—The Fibreboard Products, Inc., Antioch, has broken ground for its proposed new plant unit, and is taking subbids for different features of the work. Following general contract award to Barrett & Hilp, San Francisco, an award has been made to the Moore Drydock Company, Oakland, for structural steel. The unit will be one-story and basement, concrete, and is estimated to cost about $75,000.

Tacoma, Wash.—The Hooker Electrochemical Company, Buffalo avenue, Niagara Falls, N. Y., has approved plans for the construction of a new plant at Tacoma, Wash., to be devoted primarily to the production of liquid chlorine and caustic soda, as used in paper manufacture. Initial plant will consist of ten operating units on 20-acre tract of land, reported to cost close to $1,000,000, with machinery. A general contract for the plant has

The New EMERSON
BANDLESS PLUG



A feature of the

EMERSON *No. 2* JORDAN

The first Jordan Plug made with knives positively and rigidly held the entire length of the plug and with woods made the only correct way.

PAPER MILL OWNERS: Think of the savings effected. No new plugs to purchase on account of breakage. No new fillings due to bank breaks and loose knives.

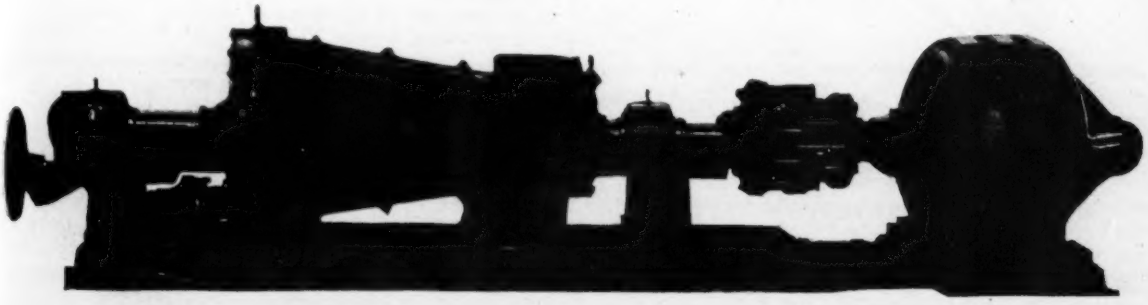
THE NO. 2. EMERSON JORDAN is equipped with Bandless Plug, Timken Roller Bearings and Bronze Filling.

Investigate this new Emerson Jordan.

Write for particulars.

MOST SERVICE FOR THE LEAST COST SINCE 1888.

EMERSON MFG. CO., LAWRENCE, MASS.



been let to the Austin Company, Dexter-Horton Building, Seattle, Wash.

Hamliton, Ohio—The Black-Clawson Company, Second and Vine streets, manufacturer of pulp and paper mill machinery, has acquired a tract of land adjoining its present plant, and will use for future expansion. It is understood that no plans have as yet been drawn for additions.

Mount Dennis, Ont.—Firstbrook Boxes, Ltd., 283 Kings street, East, Toronto, has approved plans for the construction of a new plant at Mount Dennis, and will proceed with work at once. It is estimated to cost more than $300,000, and will be equipped for extensive line of boxes and carton manufacture. General building contract has been let to the James W. Wickett Company, Ltd., 16 Saulter street, Toronto.

New Companies, Etc.

Boston, Mass.—Healey Braver & Co., Inc., has been incorporated with capital of $30,000, to deal in paper stocks and paper products. Nathan Braver is president; and Warren R. Healey, 73 Conant street, Roxbury, Mass., treasurer of the company.

Griffith, Ind.—The Mapes Consolidated Manufacturing Company, manufacturer of egg case fillers and containers, has disposed of a block of 30,000 shares of stock to total about $975,000, proceeds to be used in connection with general operations.

Memphis, Tenn.—Waste Paper Corporation has been incorporated with capital of $20,000, to deal in waste papers, etc. The company is headed by George Treadwell, Exchange Building, Memphis.

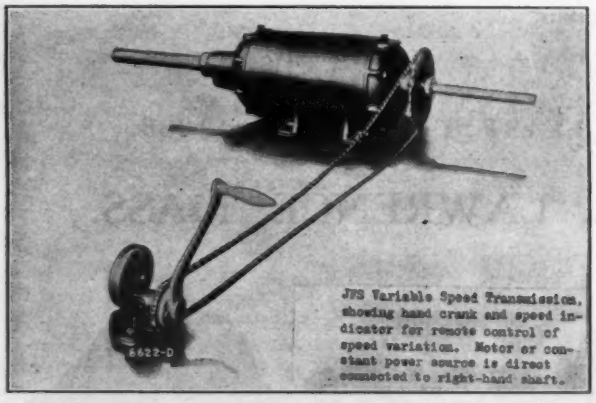
Freeport, Ill.—Super-Service Paper Company, South Adams avenue and East Spring street, has been incorporated with nominal capital of $3,000, to deal in paper bags, bags and other containers. The incorporators are George H. Ford, Clayton E. Osborn and Arthur L. Slusser. The company is represented by Green & Wheat, Freeport, attorneys.

Chicago, Ill.—The Container Corporation, 111 West Washington street, has arranged for an increase in capitalization from 350,000 to 600,000 shares of class A stock, and from 590,000 to 1,200,000 shares, class B stock, a portion of proceeds to be used for expansion.

Gearless Speed Changer and Reducer

The JFS, a new speed reducer, which permits minute variations of speed over a wide range, is being manufactured by the Stephens-Adamson Manufacturing Company of Aurora, Ill.

The ingenious application of an entirely new principle has resulted in this variable speed reducer which operates quietly, efficiently and without vibration. It may be described simply as roller bearings submerged in oil transmit power at varying speeds.

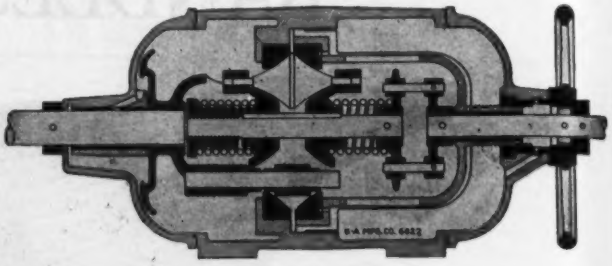


JFS Variable Speed Transmission, showing hand crank and speed indicator for remote control of speed variation. Motor or constant power source is direct connected to right-hand shaft.

NEW GEARLESS SPEED REDUCER

The high speed shaft is direct connected to an electric motor while the slow or variable speed shaft delivers direct to stokers, conveyors, machine tools, paper machinery, or in fact, any machine where it is desirable to regulate the operating speed.

Power is transmitted by means of traction between polished steel rollers and races of special shapes. Speeds are varied by changing the relative positions of the races. This output speed variation is regulated by simply turning a small hand wheel and



SECTIONAL VIEW

the increase or decrease is accomplished while the machine is at rest or in motion.

The mechanism is totally enclosed and operates in a constant bath of oil. The whole unit occupies very little more space than the electric motor to which it is attached and because it operates without gears, is very quiet.

The outstanding features claimed by the manufacturer are:

Speed Reduction. The high speed of an electric motor is reduced for direct application to conveyors, etc.

Speed Variation. Power can be delivered at any speed within the range.

Compact. Frame is little larger than an electric motor of same rating.

Efficient. All tests show over 95 per cent efficiency at full capacity.

Quiet. Being gearless, machine is quiet at all speeds.

Durable. Parts operate in oil and are protected from dust and dirt.

At all points of pressure there is nothing but rolling contact. This means that power losses are similar to those in a ball bearing of similar proportion running under full load.

Practical tests have shown that the efficiency averages over 95 per cent with machines transmitting up to their full rated capacities.

The standard machines are made in sizes to transmit ¼ to 15 hp. at the maximum reduction and will provide a range of speed variation of about 5 to 1. For example: if the input speed is 1800 r.p.m., the output shaft will have a maximum speed of 1000 r.p.m. and a minimum speed of 200 r.p.m. The speed variation is without interruption and is of especial value where a smooth control regulation is desired.

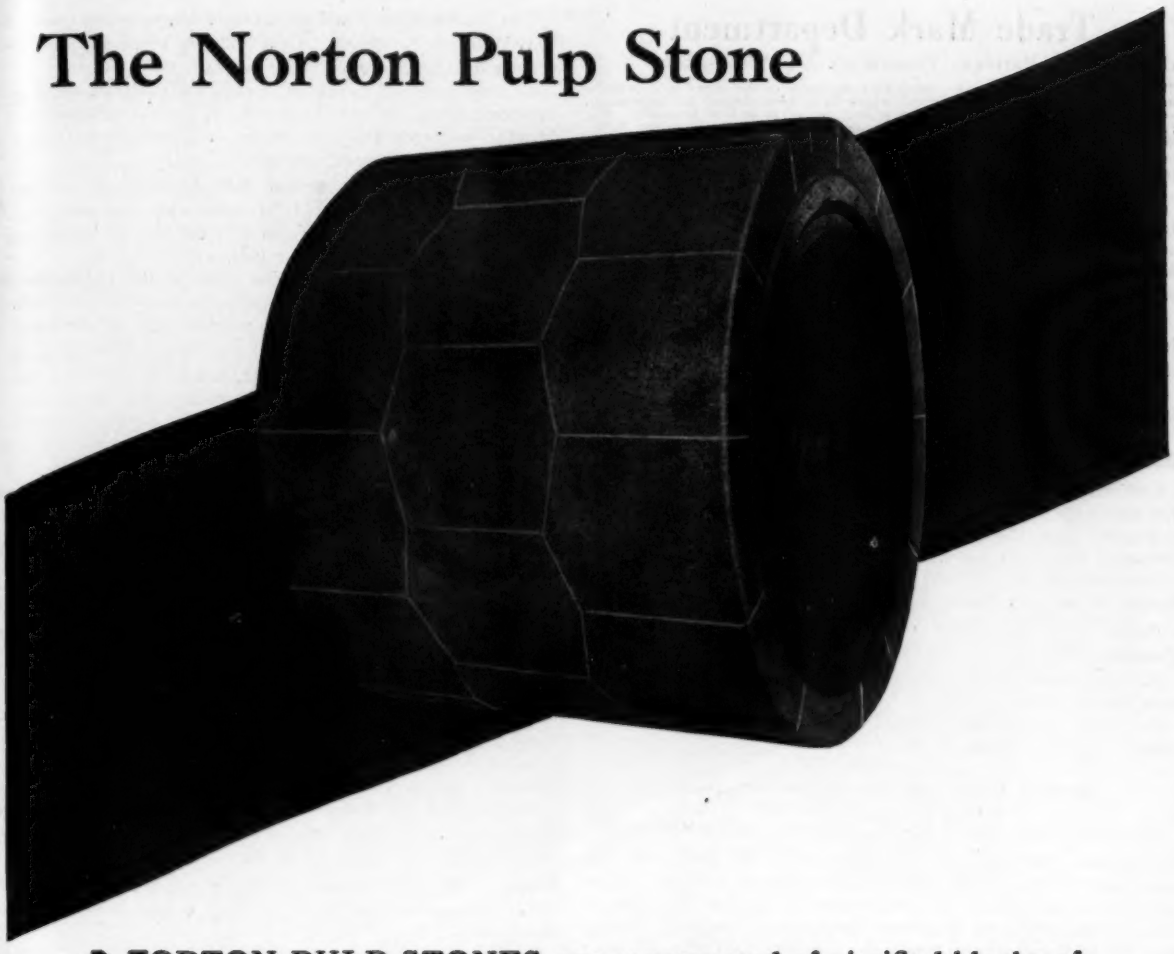
Made Honorary Members

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., October 9, 1928.—At a recent meeting of the Connecticut Valley Division of Paper Mill Superintendents the following were elected honorary members: Winthrop M. Crane, Jr., of Dalton, George Rodney Wallace, Jr., of Fitchburg, and Bradley West of E. D. Jones & Sons Company of Pittsfield.

The chapter is to have permanent open quarters in the Victory building. It was also voted to form a club to be known as the Super-Craftsmen's club to have their headquarters in these new rooms, and open to membership are not only to the members of the chapter but also to the members of the Connecticut Valley Club of Printing House Craftsmen. John J. White was appointed chairman of a committee to arrange for a meeting to be held at the Hotel Nonotuck November 24, and to procure a speaker who will deal with the problems of ruling paper.

The Norton Pulp Stone



NORTON PULP STONES are constructed of vitrified blocks of Crystolon abrasive securely fastened to a cast iron drum. The spaces between the blocks are filled with a special alloy which wears down uniformly with the stone. The whole assembly is designed to be mounted on your standard shaft and driven with your standard flanges.

The major advantages of this manufactured stone over the quarried product are: extremely long life, low stone cost per ton of pulp, a high grade of pulp and uniform quality of stone.

NORTON COMPANY, WORCESTER, MASS.

Canadian Trade Now Supplied from Canadian Plant

NORTON

Grinding Wheels
Grinding Machines

Refractories-Floor and Stair Tiles

Trade Mark Department

CONDUCTED BY NATIONAL TRADE-MARK CO., WASHINGTON, D. C.

The following are trade mark applications pertinent to the paper field pending in the United States Patent Office, which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade Mark Company, Barrister Bldg., Washington, D. C., trade-mark specialists. As an additional service feature to its readers, PAPER TRADE JOURNAL gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering.

DITTO PENORTYPE—No. 254,269. Ditto, Inc., Chicago. For paper for stationery use for business forms printed with standard business ink and also printed with ditto ink and for use in running ditto copies from typewritten originals and ditto or hectograph originals.

THE IDEAL HOME EXPENSE BOOK—No. 261,913. Schaeffer-Johnston Company, New York City. For tabularized blank book for recording expenses.

SANITOS—No. 266,711. Capital Paper Company, Indianapolis, Ind. For toilet paper.

HALOWAX—No. 269,843. Halowax Corp., New York City. For stencils and paper therefor.

CHRYSON'S—No. 269,087. Chryson's, Inc., Los Angeles, Cal. For stationery consisting of lawn papers, linen papers, and the like.

WORLD'S FAIR BOND—No. 269,277. Butler Paper Corporation, Chicago. For bond paper.

MINIT-GRAM—No. 270,027. Hunton & Hoxie Company, Inc., Boston, Mass. For letterheads.

A. P. W. JR.—No. 271,103. Albany Perforated Wrapping Paper Company, Albany, N. Y. For toilet paper.

A. P. W. FORT ORANGE—No. 271,104. Albany Perforated Wrapping Paper Company, Albany, N. Y. For toilet paper.

A. P. W. MELLO—No. 271,105. Albany Perforated Wrapping Paper Company, Albany, N. Y. For toilet paper.

Dryden Paper Mill in Better Position

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., October 8, 1928.—There is every indication that the Dryden Pulp and Paper Company will once more take its place as a prosperous unit in the pulp and paper industry. It is stated here that control has been secured by Nesbitt Thomson & Co., a leading firm of investment bankers in Montreal. Being hard hit in the post-war slump, the company has been administrated by a receiver ever since 1923, following a failure to meet its funded debt obligations. Recently there has been a marked improvement in the company's financial position, and excellent contracts place it in a favored position as regards the future. It is understood that a reorganization will now be carried out.

The company's plant is at Dryden, in the Kenora district of Ontario. It is the only company manufacturing kraft and wrapping paper for the markets of western Canada, and it therefore has a virtual monopoly of the west, other mills having to ship from Three Rivers, Que., or Vancouver. The capacity of the plant per day is 30,000 pounds of kraft sheathing paper and 70,000 pounds of kraft and manila wrapping paper. The ground wood mill has a capacity of 28,000 pounds of mechanical pulp per day, and the sulphate mill a capacity of 140,000 pounds of sulphate fiber. The company will shortly complete the installation of another 2,500 hp. generator, bringing the total installed capacity up to 10,000 hp. Another 2,500 hp. can be added at low cost.

Mead Co. To Increase Stock

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, October 9, 1928.—According to schedule the Mead Pulp and Paper Company's stockholders met in the offices of the company in the City National building the past week and took formal action providing for the increase of the company's common and preferred stock issues.

That an expansion program was contemplated was known, but when it was announced the company planned an expenditure of $3,000,000 in improvements, the public realized that the project was more important than at first supposed.

The stockholders voted to increase the common stock from 100,000 shares to 500,000 shares and the seven per cent special preferred from 30,000 to 50,000 shares.

It is not proposed to sell any of the additional 20,000 shares of preferred stock, but to hold the shares for the retirement of the Mead Fibre seven per cent bonds, and until further funds are required for construction purposes.

It was shown at the meeting that the earnings for the first six months of 1928 compared favorably with past years, the total being $482,699 as compared with $767,898 for the entire year of 1927, and $401,601 for the year 1926.

The greatest expansion will be made at the Chillicothe plant where a 25 per cent increase in productive capacity will be effected. The additions at the Chillicothe plant include a new paper machine and a coating machine and the necessary buildings to accommodate these additions. Hence, it may be seen that the proposed three million dollar campaign is to center largely in Ohio. However, the company plans the erection of a paper storage building at Kingsport, Tenn., this structure being combined with a finishing room.

Announcement was made at the Dayton meeting that common stockholders will be given the privilege of subscribing immediately to 50,000 shares of the new common stock in the ratio of one new share for every two shares held.

The proceeds of the new common stock will be used for the retirement of the Peerless Paper Company's bonds, of which there are $357,500 outstanding, as well as for the new construction and equipment.

Whiting Paper Co. Starts New Mill

HOLYOKE, Mass., October 9, 1928.—The first of the two machines in the No. 3 mill of the Whiting Paper Company began operations Thursday and the second the following day. The two new Fourdriniers, of the latest design, will manufacture high grade dried papers, the other mills of the company making loft dried papers. When running full about 200 to 300 more hands will be employed. While no steps have been taken for the installation of other machines it is understood to be the plan to put in two more machines later.

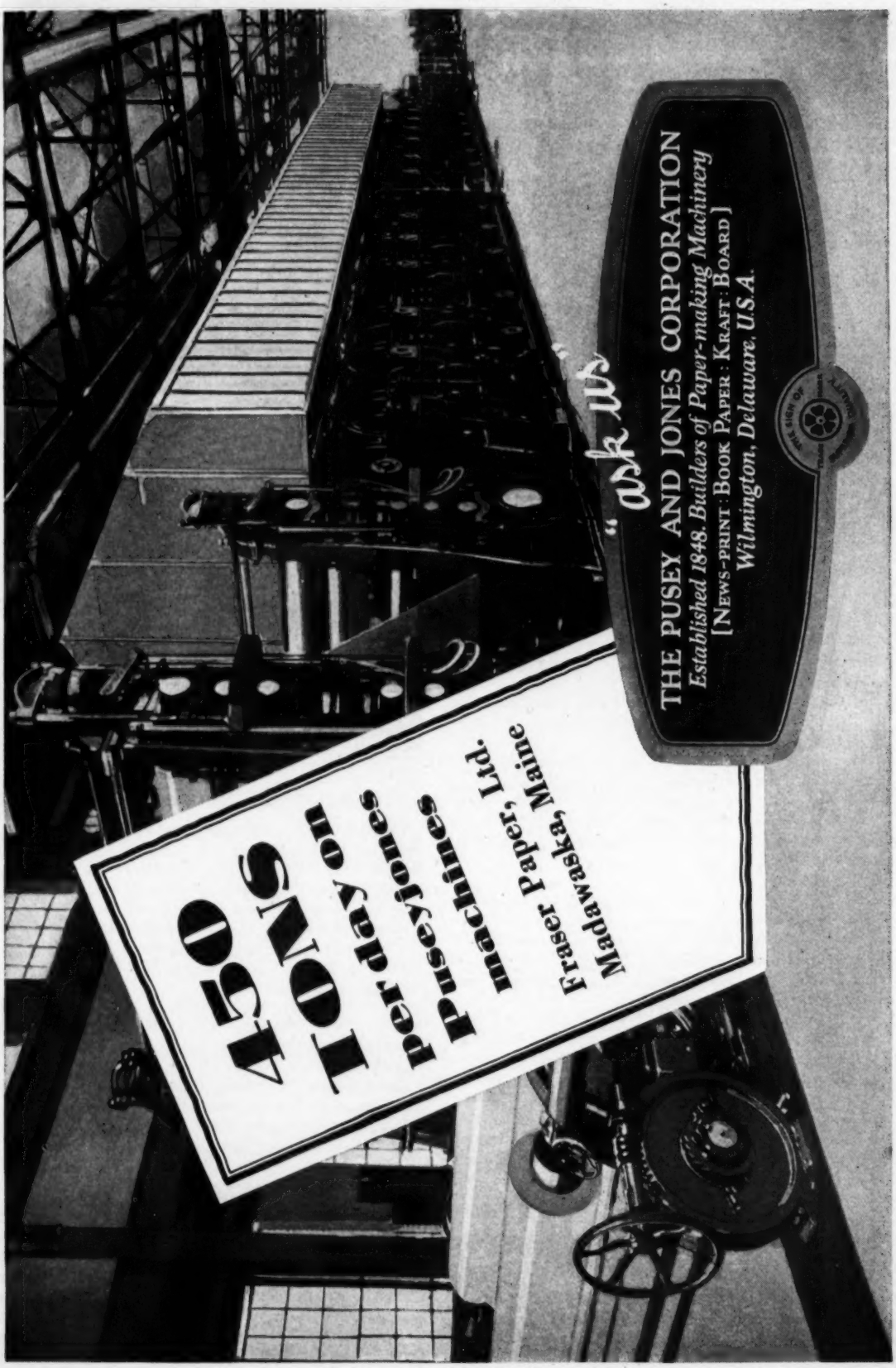
William F. Whiting, United States Secretary of Commerce, who succeeded his father, the late Congressman William Whiting, as president of the Whiting Paper Company, has retired from active service and his son, William Whiting 2d, has been elected president. The new executive is a graduate of Amherst college, 1915, and is 35 years old. He has been treasurer until recently. Edward Chapin Whiting, second son, is now treasurer, and Fairfield Whiting superintendent.

Several months of work have preceded this new paper manufacturing development. The old Lyman No. 2 mill, part of the Lyman Mills plant bought by the Whiting interests, has been reinforced from top to bottom with structural steel and the two lower stories have been made into one large room of two story height to house the big new Fourdriniers built by Rice Barton & Fales. The two upper stores of this mill have been equipped with special processing machinery.

This building is directly connected with the large No. 5 mill along the second level canal and all the five stories of this mill will be put to use. The first floor will be used as the shipping department, the second floor as the beater room, and the third floor as the rag room. The two upper floors will be used for storage.

New St. Croix Paper Director

WOODLAND, Maine, October 3, 1928.—Sheldon E. Wardwell, of Boston, has been elected to the board of directors of the St. Croix Paper Company, succeeding the late Fred L. Atkinson. Mr. Wardwell is also a director and member of the executive committee of the Great Northern Paper Company and director of the Champion International Company.


450 TONS per day on Pusey & Jones machines
Fraser Paper, Ltd. Madawaska, Maine
"ask us"
THE PUSEY AND JONES CORPORATION
Established 1848. Builders of Paper-making Machinery
[NEWS-PRINT : BOOK PAPER : KRAFT : BOARD]
Wilmington, Delaware, U.S.A.

New York Trade Jottings

J. A. Bothwell, general manager of the Claremont Paper Company, Inc., and the Brompton Pulp and Paper Company, Ltd., is spending a few days in New York this week.

* * *

Offering will be made this week of $7,900,000 Gatineau Power 1st 5s, due 1956, by the syndicate which sold last month $7,500,000 debenture 6s of the power company.

* * *

The Chamber of Commerce of the State of New York has just published a classified list of trades and allied associations and publications in the City of New York, with appendix of Government offices.

* * *

W. C. Hamilton & Sons, manufacturers of fine papers, of Miquon, Pa., announce the removal of their New York offices to 261 Broadway, opposite City Hall Park. Spencer J. Blake is the local representative.

* * *

Permanent certificates for common and preferred stocks of Graselli Chemical Company have been admitted to the list of New York Stock Exchange. The temporary certificates for the common and preferred will be stricken from the list October 15.

* * *

R. S. Kellogg, secretary of the News Print Service Bureau, and chairman of the National Forestry Program Committee, and others, are appearing today, Thursday, before General Lord, Director of the Budget, in Washington, D. C., in connection with the forestry appropriation for the next fiscal year.

* * *

Chester Robbins, of the Oswego Board Corporation, gave an instructive and interesting address on insulating materials at the regular weekly luncheon and meeting of the New York Division of the Salesmen's Association of the Paper Industry, which was held in the Canadian Club last Monday.

* * *

Returning from a six month's tour of the British Isles and the Continent, William Howarth, president and treasurer of the Everett Pulp and Paper Company, is visiting his many friends in the New York paper industry before proceeding to the Pacific Coast. He is making his headquarters at the Pennsylvania Hotel during his stay in this city.

* * *

Eighty-six per cent. of the 7 per cent. preferred and 87 per cent. of the common of the International Paper Company have been deposited under the plan for the formation of International Paper and Power Company, and the plan has been declared operative. Stockholders who have not yet deposited their stock have until October 20 to do so.

* * *

The New York Association of Dealers' in Paper Mill Supplies held its first meeting of the fall season at Conte's Restaurant, 432 Lafayette street last week. The meeting was specially held to welcome home Walter H. Martens of George W. Millar & Co., Inc., who has been on an extensive European business trip. Secretary Alfred J. Moran presided. Louis Gottleib, of the New York office of the Leshner Paper Stock Company, moved that a present be purchased for Mr. Martens in token of appreciation by fellow members. The Mitchell Paper Stock Company, of 342 West 13th street, and the Charlton Waste Paper Company, of 168 South street were elected to membership.

* * *

Fall meetings of the National Association of Waste Material Dealers are to be held at the Hotel Astor, New York, on Tuesday and Wednesday, October 16 and 17. The general meeting has been called for October 17 at 2 p.m. and will immediately follow a get-together luncheon which will be served promptly at 1 p.m. Because the annual meeting and banquet in March are to be held in Chicago, the October meetings will furnish the only opportunity for members to get together here in the East for quite a considerable time and it is hoped and expected that a large number of members will be in attendance. This will also be the first general meeting at which representatives Paper Company, of 168 South street, became members.

Russian Paper Men Visit New York Mills

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., October 9, 1928.—A party of Russian paper mill men interested in the purchase of American-made paper mill machinery paid a visit to Northern New York this week. The party, all of whom are identified with paper making in Moscow, included E. V. Tayettz, F. Fonasdoeff and T. Khramtzoff. Early in the week they visited Watertown and inspected the plant of the Bagley & Sewall Company where they were interested in several large machines under construction. While in Watertown they were the guests of Charles W. Valentine, president, and Edward S. Lansing, vice president, of the Bagley & Sewall Company, and after making a thorough inspection of the plant the visitors were entertained at luncheon in the Black River Valley Club.

The same party visited the United States two years ago at which time they made a study of American manufacturing methods and machinery, visiting many of the Northern New York mills. The company which they represent was in the market at that time for a paper making machine for the Moscow mill. After comparing costs of the American and European product their firm decided upon a German-made machine which was installed and has since been in operation. However, the German machine is said to be unsatisfactory, hence the present trip here.

The visitors are said to be thoroughly convinced of the superiority of the American machines after seeing a number in operation in Northern New York mills. The men visiting here are not commissioned to make any actual purchases but their enthusiastic remarks indicate that upon their return to Russia they will recommend to their directors the purchase of American-made machines.

Boston Paper Men Parade for Hoover

The Boston paper merchants are planning to turn out in full force at the big Hoover and Curtis torch-light procession on November 2. The following committee has been appointed to handle the Paper Division: Walter M. Pratt, chairman; George D. Allen, Knight, Allen & Clark; Floyd Blackman, D. F. Munroe Company; Charles T. Dole, Champion International Company; J. C. DeCoster, American Writing Paper Company; C. L. Dodge, Albemarle Paper Manufacturing Company; K. B. Fullerton, Manufacturers Paper Company; Roger S. Hubbard, John Carter & Co.; F. H. Keep, W. H. Claflin Company; Frank H. Merrill, Andrews Paper Company; W. J. McLellan, Carter, Rice & Co.; Waldo E. Pratt, Hollingsworth & Whitney Company; H. R. Woodward, Train Smith Company; F. Bendel Tracy, Fort Hill Paper Company; Charles A. Procter, Procter Paper Company, and Edward B. Bement, Estey Paper Company.

Practically every paper house in Boston will be represented by a large turn-out ranging from executives to the office boy.

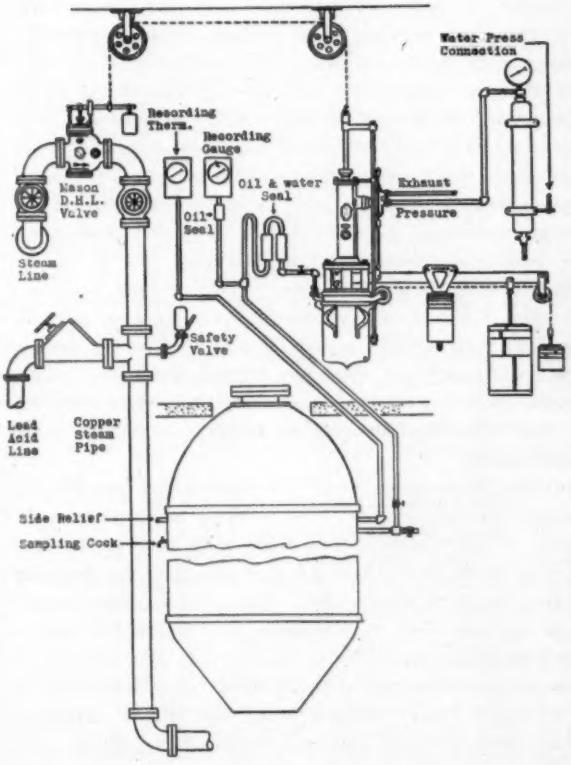
Bids for Government Paper

WASHINGTON, D. C., October 10, 1928.—The Government Printing Office has received bids for 40,000 pounds of manila census tabulating card board in 26½ inch rolls: R. P. Andrews Paper Company, at 7.84 cents per pound; Barton, Duer & Koch Paper Company, 7.42 cents; Reese & Reese, 7.9 cents; Atlantic Paper Company, 7.35 cents; and Mathers-Lamm Paper Company, 8.5 cents.

To the Sulphite Superintendent–

Here's the Mason No. 131 Regulator for digesters—

and here's the general arrangement of this hydraulic regulator for sulphite digester pressure control.



The Mason Combination Reducing Valve maintains a steady accurate pressure of steam to the digester. It is specially designed for the accurate control of pressures under widely varying demand. High initial pressures and superheat do not affect the dependable operation of this valve.

Furnished for the following ranges of reduced pressure: 0 to 3 pounds, 2 to 25 pounds, 20 to 125 pounds and 100 to 250 pounds.

Write for a copy of Catalog No. 62 which gives a complete description and prices of all Mason Regulators.

Mason Regulators

MASON REGULATOR CO.
Boston, Mass.

San Francisco Office—606 Howard Street

Mason Regulator Company of Canada, Ltd.
686 Notre Dame Street West, Montreal

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PAPER TRADE JOURNAL
ESTABLISHED 1872

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Vol. LXXXVII New York, Oct. 11, 1928 No. 15

NEW YORK'S PAPER INDUSTRY EXPANDS

A review of paper mill activities in Northern New York shows the paper industry of this region passing through a period of widespread expansion. This expansion is not confined to any one section but is distributed through the entire region. Since the first of the year millions of dollars in new construction have been expended by paper mill firms and building programs which will run into millions of dollars are under way or contemplated. This widespread building activity, according to industrial engineers, is one of the best indications of the healthy condition of the paper industry.

The Northern New York paper industry which has been undergoing a period of readjustment for a year or more is believed by representative producers to be well on the way to a new era of prosperity. For years noted as one of the leading newsprint producing centers of the county the product has gradually been changing and today the trend is distinctly toward specialty papers.

Since the shrinkage of New York State timber supplies the newsprint production has been shifting steadily towards Canada. While Northern New York Mills continue to produce some newsprint the production of this paper has dwindled to a fraction of its former value. The great expansion under way in Northern New York industry is in the line of papers other than newsprint.

One of the most active of the Northern New York firms is the St. Regis Paper Company which has already expended, through its subsidiaries, several million dollars and has construction work under way at present that will increase this figure considerably. The principal items in the St. Regis program include the new Taggart-Oswego mills completed early in the year and now undergoing enlargement; the Oswego Board Corporation mill; the large addition under way to the Champion Paper Company at Carthage; complete electrification of the Hanna group of mills together with overhauling and modernizing of machinery and numerous minor improvements and repairs.

In connection with the construction of the new bag mill at Carthage and the doubling of capacity of the bag mill at Oswego it is safe to say that the St. Regis Paper Company already an important factor in the paper bag trade will become one of the leading producers of kraft sacks when the increased production at Oswego and Carthage becomes available.

The International Paper Company has also expended large sums at Fort Edward, Glens Falls and Corinth in converting its mills at these places to paper products other than newsprint. The A. P. W. Paper Company, of Albany, has a new building program under way which will cost approximately $1,200,000.

At Mechanicville the West Virginia Pulp and Paper Company is spending approximately $500,000 on plant enlargements. The Gillette M. Stillwater in the same vicinity has taken over and improved the entire group of buildings of the Wood-Flong Company, the latter moving to a newly acquired plant at Hoosick Falls. The Benr-Manning Corporation, at Watervliet, has construction work under way on several new buildings which will cost more than $200,000. The Norstrand Manufacturing Company of Plattsburg, recently formed to take over the pulp mill of the Saranac Pulp and Paper Company, is spending a considerable sum in adding to the capacity of this mill.

There are only a few of the more important projects. Practically every mill of the Northern New York section has been improving plants and machinery, all aiming at greater production and lower manufacturing costs. The great amount of new capital being invested in the Northern New York paper industry is a convincing argument as to the soundness of basic conditions and a bright future in the paper industry in this section.

ATLAS OF WOODS ISSUED

The first Atlas of the commercial woods of the United States has just been issued by the New York State College of Forestry. Dr. H. P. Brown, Professor of Wood Technology, is the author of the publication, the principal feature of which consists of sixty plates illustrating the structure of the various commercial timbers. The illustrations are not made from positive pictures in the usual way but from negative prints which give an exact reproduction of the wood structure as it appears in the natural state at low magnification.

In explaining the utility of the publication Dr. Brown says: "Confusion has always existed in the trade as to the identity of our commercial timbers, even among those who have handled them for years, and costly mistakes have resulted which could easily have been avoided had the proper information been available. There is no mystery about wood identification. Anyone can readily learn to recognize our common timbers if he will but train his powers of observation. The universal use of wood for so many purposes in this country makes it a necessary part of every day existence; ability to identify the common kinds will save embarassment and expense."

Dr. Brown states that photographs of transverse sections of wood at low magnification are of inestimable value to novices since the several structural features are thereby shown in clear detail but that illustrations of the right type unfortunately

have not been available up to the present time. Often the magnification is too great and the area too restricted to make the pictures of any real value in identification. The reproductions in the Atlas show the wood at low magnification across the grain and cover an area of a size sufficient to indicate the general structural features of the wood.

May Build Paper Mill at Seattle

[FROM OUR REGULAR CORRESPONDENT]

SEATTLE, Wash., October 6, 1928.—That Seattle may have a $2,000,000 pulp and paper mill within the next year was disclosed when William E. Eibel, general manager of the Rhinelander Paper Co., of Rhinelander, Wis., announced he had chosen this city as the logical location for the industry after an exhaustive survey of the entire Pacific Coast.

Mr. Eibel, who for years has been connected with the Rhinelander Paper Company, recognized as one of the most successful paper making concerns in the country, has spent three weeks investigating conditions from California to Vancouver, B. C., and has decided, he said, that Seattle is outstanding among Coast cities as a desirable location.

"It is too early for me to say definitely that we will build here," said Eibel, "but we are considering the project very seriously. If our plans are realized, we would be able to start building within six months. We can interest Eastern capital to the extent of $2,000,000.

"I am amazed that Seattle has no pulp and paper mills," Mr. Eibel said. "Nearly every other city on the Coast in this vicinity is developing rapidly in the manufacture of paper, although Seattle has every advantage over them—transportation, abundant material, available power and everything else needed for the successful operation and maintenance of a paper mill. The whole Coast offers great possibilities in the manufacture of glassine and greaseproof papers, in which my company specializes, but I think Seattle offers the greatest possibilities of any city on the Coast.

"We are interested in locating on the Coast because the cost of production here is much lower than in the Middle West. If we build a plant here we expect to employ some 350 persons, with an annual payroll of approximately $700,000."

In his investigation of paper manufacturing conditions on the Coast Mr. Eibel has been accompanied by A. E. Millington, vice president and general manager of the Fir-Tex Insulating Company of Portland. The two held a conference with Tom G. Taylor and Sherman M. Miles of the Tom G. Taylor Company at the Olympic Hotel yesterday.

Another Unusual Record

GEORGETOWN, Ont., October 4, 1928.

Editor, PAPER TRADE JOURNAL:

On page 45 of your issue of September 27, 1928, you published a letter from the Mosinee Paper Mills Company, regarding the record of Mr. Ward, one of their beater engineers who was retiring from service. Mr. Ward's record is certainly unique, but we think we can beat it.

James Scott, one of our beater engineers, started work, in what was then known as the Barber Paper Mill, in 1860 at the age of 10 years, and has a record of continuous service in the same mill since that year. He is still hale and hearty and says that he has no intention of retiring for some years. Mr. Scott has always enjoyed good health and claims to have had less than five dollars' worth of medical attention so far during his life.

Both Mr. Ward's and Mr. Scott's records are unusual and we would be interested to hear of any others that can equal them.

Yours truly,

ED MCWHISTER, *Superintendent,*
Provincial Paper, Limited.

Mead Paper Board Co. To Expand

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, October 9, 1928.—An interesting announcement was made here the past week by the Mead Paper Board Company, subsidiary of the Mead Pulp and Paper Company of Dayton, when it was stated that negotiations virtually had been completed for the acquisition of a third tanning extracts plant located at Lynchburg, Va. This will be added to the two recently joined to the Mead Company.

The John H. Heald & Co., with plants at Lynchburg and Radford, is to be merged with the Mead Paper Board Company on terms similar to those recently announced with the merger of the Mead Company, the Southern Extract Company, Knoxville, Tenn., and the Sylva Paper Company, Sylva, N. C.

The Heald Company was taken over for the purpose of utilizing the waste chips of chestnut wood, residue left after the extraction of tanning fluid or material, for the manufacture of paper board.

It is stated that paper manufacturing plants will be located at the Lynchburg extract factory, as well as at Knoxville and Sylva.

As previously stated in these columns, the paper manufactured from chestnut chips is valuable in the manufacture of corrugated paper for boxes and packing, being more rigid than straw paper now generally in use, it is stated.

The Mead Paper Company's research department is testing other uses to which the chips may be put.

It is stated that the paper mill to be erected at Lynchburg will have a capacity of 80 tons of paper daily and will employ 100 men. It is planned to start construction work within 30 days.

Officers of the merged Lynchburg concern will be Charles E. Heald, Lynchburg, chairman of the board of directors; W. M. Heald, Lynchburg, president; Sidney Ferguson, New York, and Charles Oberfell, Lynchburg, vice-presidents; Alan G. Goldsmith, Dayton, treasurer; and Robert Landis, Dayton, secretary.

The Board of Directors will consist of Charles E. Heald, Lynchburg, chairman; George H. Mead, John G. Sutherland, Robert Landis and Alan Goldsmith, all of Dayton; Sydney Ferguson and Wistar M. Heald.

The Heald Company was organized as a tannery in Baltimore, Md., in 1849, and moved to Lynchburg in 1869. It was the first concern in the United States to limit its activities solely to the manufacture of tanning extracts, and has developed until today it has the largest plant of its kind in the United States.

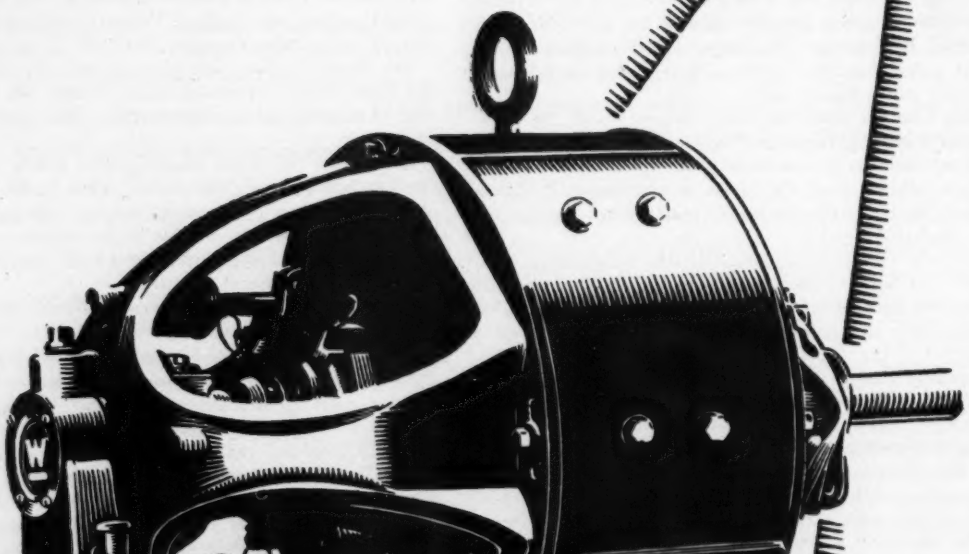
I. P. Co. Stockholders Deposit Stock

86 per cent of the 7 per cent preferred stock and 87 per cent of the common stock of the International Paper Company have been deposited under the plan for the formation of International Paper and Power Company. The plan has accordingly been declared operative.

Stockholders who have not yet deposited their stock are being notified by the committee that they have until the close of business October 20 to do so. The committee is urging these stockholders to deposit their stock immediately and expresses its belief that the consummation of the plan, and the exchange of shares in International Paper Company for shares in International Paper and Power Company, will be advantageous not only to the business of the International Paper Company system as a whole, but to each class of stockholders making the exchange. The committee consists of the following: Frank N. B. Close, Archibald R. Graustein, John R. Macomber, John W. McConnell, John S. Phipps, Albert H. Wiggin, and Owen D. Young.

The International Paper and Power Company will act as a holding company for the properties now owned and controlled by International Paper Company and it is expected to hold a very large majority of the common stock of New England Power Association.

COMPETITION STARTS IN PRODUCTION LINES



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Section of the
Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Edited by
RONALD G. MACDONALD, Secretary

Technical Control for Paperboard Mills*

By E. Frank Whittington [1]

Inasmuch as the tonnage of board produced in 1927 represented 37 per cent of the total production of all paper, which was 9,741,000 tons, it would seem only logical that the board mills should lead in technical control but we who have succeeded in wedging ourselves part way in, must confess with regret that our section of the industry is rather behind the times. I say with regret but not with discouragement we admit this because we are now forging ahead and are being pushed ahead just as the fine paper mills were by consumer demands.

Due to the fact that board mill control is not very widespread as yet, this paper must of necessity, be largely theoretical and being theoretical is (in the words of Charles E. Carpenter) worth what one man thinks. It would be better to head this paper "Possibilities of Technical Control in the Paperboard Mill."

Probably the most logical place to begin our board control work is on the incoming raw materials. Obviously, we cannot make a uniform product with non-uniform materials.

Standards will have to be set arbitrarily by taking as the standard a certain lot or lots of the material in question which seem to prove satisfactory. It may be found advantageous to raise these standards later or it may be necessary to lower them.

Water

What materials can we test and are there any which we cannot control? The largest item as to volume in the process is water. It certainly would be good if we had ample storage capacity so that we might treat chemically all of our water before it gets to the mill but I believe that the necessary equipment and space are not warranted by the slightest advantage gained because the water can be treated in the beater as used and satisfactory results may be obtained.

Pulp and Shavings

Next in importance is the pulp. This should be subjected to a moisture test and also a beater test and the strength and fold determined. A dirt count should also be made on the original samples. We handle the latter by taking disks at the same time that we take samples for moisture test. So much has been said and printed regarding strength testing of pulp that I need not stress its value here.

Along with pulp, we should consider shavings and clippings, which should be examined for excessive moisture, groundwood in sulphite shavings, and soda pulp in supposedly straight sulphite.

News bales also must be watched for excessive moisture and iron rails.

Size Alum and Fillers

Size and alum are important chemicals which should be studied. The companies supplying the former are few and large and maintain efficient laboratories. Although discrepancies will be rare, accidents happen.

The matter of size analysis is being handled by the Materials Testing Committee of TAPPI but for routine mill control purposes, I believe that total solids, total rosin and free rosin are sufficient and in many cases, the latter may be omitted.

Size emulsion should be tested constantly. This is where you will get a variation. Keep it uniform as to solids content. The same remarks in general could apply to alum, except that there are more producers and consequently more variations are likely.

Starch should not cause any trouble unless dirt is present. We have never been troubled in that way in our mills.

Clay or mineral filler must be compared with established standards for color . Other tests would be fineness and moisture.

The preparation of colors offers fertile field for adulteration, which I believe is practiced to quite an extent. Adulterated colors are often obtained if the purchasing agent is anxious to buy on price. Solubility and color strength are the principal tests. The strength being compared with a standard by dipping a V-shaped filter paper in solutions of same percentage strength, of standard and sample. In the case of mineral colors, which are insoluble, make a "draw down" of the color by diluting it with a good white china clay, moisten with mineral oil and draw down with a spatula on white paper. The standard and sample are drawn down together and where the two pastes meet, it is easy to distinguish a small variation in color.

Beater Room Control

Following the control of raw materials comes the manufacturing process and we, of course, must start with the beater room. One of our machine tenders told me "give us a good stock and we will make good paper." A very obvious statement but probably the most neglected factor in the board mill.

The old phrase "anything goes in board," has been too dominating a force for our own good.

In beater room control, we can and should, apply all the tests and control methods used by the finer paper mills and I am certain that we could profit by them.

First, we should control the furnish. Moisture tests on pulp will aid here. Weigh out the various pulps or shavings for each

* Presented at Fall Meeting of TAPPI, Wausau, Wis., September 27, 1928.
[1] Member TAPPI; Chief Chemist, Sutherland Paper Company, Kalamazoo, Michigan.

beater. Beater capacities should be figured on a bone dry basis. Starch or filler must be weighed or measured although the former is rather difficult to handle. Size and alum are generally handled in solution form now and may be accurately measured with little difficulty. Measuring the alum is of less importance, however, since we are going to use the pH measurement to insure uniform sizing in consecutive beaters.

Better sizing will be obtained if the stock is neutralized immediately after furnishing. To insure a uniform weight on the machine, consistency regulators or some means of rapidly making a consistency test should be used in the beater room and the beaters always dropped with a definite amount of water. The freeness test should be used on the liners in particular and will be helpful on the fillers as well, especially when running board which must have good bending qualities. Slow stock will never make a good bender.

The freeness test should govern the beating time and beaters dropped with the definite freeness which has been established for the various grades of board made.

Board Machine Control

Perhaps some who may hear or read this will not know just how board is made so let me explain very briefly. Board is built up in layers on a cylinder machine; each cylinder acting as a sheet mold to form a thin sheet which is couched onto an endless felt and carried to the second cylinder where another sheet is couched onto the first and so on for five, six or seven cylinders. The first and last or two outside layers of the board are called liners and the others are known as fillers. Sometimes the second layer is called an underliner.

Next will come the machine control tests, first, of course, being the more obvious ones such as, basis weight and caliper. The second is very important when selling on sheet count and must be considered also when selling on weight only as the customer is entitled to the maximum number of sheets to the hundredweight.

Moisture must be checked. Excessive drying is a costly operation and will usually cause curling when the board is later subjected to a humid atmosphere. The amount of moisture to have in the board will vary considerably with the treatment it is to receive after leaving the mill. We have had orders where 5 per cent moisture was demanded and delivered too. Other times, we have found it desirable to leave 7 or 8 per cent of water in the board. When the proper amount has been determined, tests should be made as often as every hour, or if reels are being made, then each reel should be tested. Caliper and basis weight can be determined on the same samples and I figure my moisture on the weight of the sample as it leaves the machine.

The next test of importance is that of finish. The necessity of this test will be governed by the use of the board. Our product is practically all used for printed cartons. Finish can make or ruin a print job as was evidenced in our plant a month ago. The printing department tried to use two different runs of board on the same carton job and ran into specking on one lot due to picking and as was expected, I found considerable difference in per cent of gloss as determined by the glarimeter.

Size testing is very important on some grades of board or perhaps I should say, would be important if we had a really suitable means of testing it. The nature of the material is such that an accurate measurement is difficult to obtain. Part of the sheet is hard sized and the middle layer will probably be unsized. It is not fair to use such a sample since it prevents comparable results when you allow the large amount of unsized stock to interfere with the size test on the small amount which is sized. This, I believe, s a good problem for the Paperboard Committee of TAPPI to work on.

The Mullen test results are valuable to the superintendent in making various runs of the same grade, uniform. It is not usual that a Mullen test is specified on box board, while on container board it is required.

The tearing strength of board is, in my estimation, of no value, while the tensile strength and fold are of great importance. It is true enough that board is not going to stand a great deal of folding but with board that is going into folding cartons or shipping cases, it certainly should stand some, and the higher we can get the fold, the better looking cartons we will have. A tensile strength test after folding and also after creasing will tell us a great deal as to the quality of boxes that the board will make.

Some work along this line has been done at the Mellon Institute under the Paperboard Industries Fellowship. Their results indicate that after scoring and giving one double fold, the tensile strength is reduced on an average about 50 per cent. They also found that the Schopper folding tester for board gave very erratic results so before we can run folding tests which will be of any value, it will be necessary to devise a machine for the purpose. This suggests more work for the Paperboard Committee of the Technical Association.

Ash tests might be valuable in checking up mineral filled retention, providing the liner only is used on the test. Newspapers give very unreliable ash tests and could not be made with any hope for intelligible results.

Another test which will have no bearing on the quality of board but will prove of value nevertheless is a weekly check on the white water from each cylinder of each machine. A loose collar can waste much stock and this will show up in the test. We do not attempt to actually measure the solids in these samples but base our reports on a purely observation basis. The samples are lined up in a test tube rack and a small leakage will show up as a more cloudy white water. A centrifuge can be used to advantage here if one is available and numerical values can be determined.

In the preparation of this paper, it has not been the intention of the writer to bring to you information as to actual results obtained by the application of technical control because results of a definite character are not available, or only partly so. The intention has been, rather to bring before you the possible application of well known control tests in the manufacture of paperboard.

Summary

Being summarized, the tests for paperboard should include:

1. Analysis of incoming raw materials.
2. Weighing of beater furnish.
3. Check of size and alum solutions.
4. pH freeness and consistency of beater furnish.
5. Basis weight and caliper of sheet.
6. Moisture of finished board.
7. Degree of sizing.
8. Surface finish or gloss of board.
9. Ash content of board.
10. Bursting, tensile and folding strength of board.

A. S. M. E. Printing Industries Meeting

On November 8, 1928, the Printing Industries Division of the A. S. M. E. will hold a national meeting at the Hotel Sagamore, Rochester, N. Y. The following papers which will be presented should be of interest to paper manufacturers: "Color Ink Standardization and Its Advantages," by T. W. Anstead, of Ault & Wiborg, Cincinnati, Ohio; "The Field of Lithographic Printing," by George C. Van Vechten, of the Stecher Lithographic Company, Rochester, N. Y.; "Relation of Proofing to Color Printing with Respect to Accuracy and Color Results," by L. W. Claybourn, of Milwaukee, Wis., and "Multicolor Rotogravure Printing," by John W. Park, of the *Chicago Tribune*. There will also be an opportunity to visit the plants of the Eastman Kodak Company, Stecher Lithographic Company, *Rochester Times-Union, Democrat and Chronicle*, The Hurst Engraving Company, and the John P. Smith Printing Company. A remarkable Japanese Aeronautic Research Institute film will be displayed that contains photographs taken at the rate of 20,000 per second. George D. Bearce is chairman of the pulp and paper sub-committee of the Printing Industries Division.

The Rosin Sizing of Paper*

Part I—Historical Review

By S. R. Olsen [1]

A. Early History. 1807-1900.

Discovery of the Rosin Sizing Process

The use of rosin as a sizing medium for paper dates back to 1807 when a German watch maker, Moritz Fredrich Illig (1777-1845) described his process in a brochure which he published and offered for sale for a sum of fifty guilders (about $20.00). The new method, like many discoveries, came at a time when there was no urgent need for it since in those days paper was made by hand, and the amount of animal glue which was used as a sizing agent was very small. With the coming of the paper machine (1820) and mass production, Illig's method of sizing paper with rosin began to receive serious consideration. The discoverer sought to introduce his new method into France where he was warmly received because, at this time, the French government, as well as scientific societies, was vitally interested in discoveries of all sorts. The method seems to have gained such favor in France that in later years it was the popular idea that the process originated in France. In fact, it was not until 1880 that Carl Hoffman, editor of Papier Zeitung, became interested in this matter and through his publication made inquiry regarding the origin of the process and the place where it was first used. But little information resulted from this inquiry. The paper makers were ignorant as to the origin of their "sizing recipe." This was not so strange since rosin sizing had been practiced in most plants for over fifty years. This agitation, however, did produce some positive results.

Rediscovery of Process

In a German paper mill there was found one of Illig's original brochures published in 1807. It was apparently the only remaining copy of Illig's valuable work. In Paper Zeitung of 1887 [2] is found a reprint of Illig's original work entitled: "Anleitung auf eine sichere, einfache und wohlfeile Art Papier, in der Masse zu leimen."

About this time it was also learned that Illig's father had been a paper maker operating a mill at Amorbach and one at Erbach in Odenwald. Young Illig gave up watch making in 1799 to work in his father's mill at Amorbach. As far as we know, it was here that Illig began working on his sizing process. He tells how the idea first came to him to experiment on the sizing of paper with materials other than glue. He believed that he could cause particles to be taken up by the paper fibers just as dyes were, thereby causing the paper to be sized.

Illig first experimented by sizing with ordinary milk precipitated with alum. This is probably the first recorded reference to the use of casein for sizing paper. The resulting paper was sized satisfactorily for writing with ink but due to the scarcity of milk he turned has attention to the resins, gums and waxes. His first problem was to render these substances water soluble, which he did by boiling them with an alkali.

This alkali-rosin was then put into solution in warm water and a measured amount put into the hollander (beater) mixed with the cellulose fibers and precipitated with alum. Although at the beginning of the nineteenth century chemical investigation was in its infancy, neveretheless when we read Illig's description of the sizing process using rosin, we are astonished at the clearness and accuracy of his description.

Illig advanced the theory that in order to size paper with a substance, such as rosin, which is insoluble in water, it must first be transformed into a water soluble substance, then mixed with the fibers following which the rosin must be rendered insoluble and the alkali separated so that the rosin regains its original properties.

Illig says [3] "They (i.e. portions of alum) are added in order that the dissolved rosin may be precipitated from its solution upon the paper substance. The acids combine with the alkalies which hold the rosin in solution, and this is then precipitated in flocculent form and in a large part adheres to the paper substance". From these statements it would appear that Illig had very definite ideas as to the chemical processes produced by the coming in contact of alkaline rosin solution and mineral acids. Although Illig regarded alum as an acid fluid, he described it as consisting of alumina and oil of vitriol, and concluded that it played the same role toward rosin solution as would a mineral acid. Chemical processes were but little understood at that time and as Illig was not a chemist, it would have been difficult for him to have made closer or more accurate observations in regard to the properties of the substances with which he experimented. He was led to believe that alum had no other function than to separate the alkali from the dissolved rosin and thus to return the rosin to its original condition.

Shortly after this, when the theory of chemical action was better understood, it was postulated that the sodium resinate was converted to an aluminum resinate. Illig's theory therefore, as far as the behavior of alum was concerned, was contested inasmuch as it was contrary to the popular chemical idea.

The mistake that the later workers made, however, was that they halted with their theory and did not experiment to determine just how the chemical decompostion actually proceeded. Nether did they investigate what products of chemical reaction were present in the finished paper.

Adoption of Rosin Sizing by Papermakers

Paper makers began to use rosin sizing about 1820-1830. They entirely disregarded Illig's clear and concise description of the process, and his suggestion that it was the free rosin which sized the paper. Because of their newly conceived ideas of chemical reactions, it was supposed that aluminum resinate was the active sizing agent. This theory prevailed for over a century in spite of the fact that there was no experimental proof for such a theory. The belief in this theory led to numerous experiments which resulted in many secret sizing formulæ. Even rosin precipitated from sodium resinate by alum was added to the hollander in solid form in one of these secret processes. That the aluminum resinate theory was commonly accepted and deep-rooted can be concluded from the fact that books published on paper making about 1860-1870 proclaimed this as the "one and only" theory. This was definitely not Illig's view.

Wurster's Researches

Dr. Casimir Wurster is undoubtedly the second great name to be connected with rosin sizing. His ideas which were the results of practical experience did not agree with the then accepted theory that aluminum resinate was the active sizing agent. He studied the German literature in order to determine the origin of the theory and the cause for its acceptance, but as he says, he could

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* Published with the approval of the Director, as Paper No. 801, Journal Series, Minnesota Agricultural Experiment Station, University of Minnesota, St. Paul, Minn.

[1] The work reported in this paper is a portion of a Master's thesis submitted by Mr. Olsen to the Graduate School of the University of Minnesota. This work was made possible by the Cloquet Wood Products Fellowship. Thanks is due especially to the Northwest Paper Company, for the cooperation extended in the laboratory as well as in the mill.

[2] Pages 1161, 1197, 1229, 1261 and 1369.

[3] Free translation.

find nothing. Neither could he find any information concerning Illig's sizing process. He then went to Paris for six months and reviewed the French literature. The results of this study were published in 1878.

Wurster's[4] writings and researches are found to be unusually clear, which distinguishes them from other publications of his time, on the same subject. By condemning the aluminum resinate theory and setting forth his "free rosin" theory Wurster made himself very unpopular, in fact so much that for a period of about ten years he did not publish his researches in German journals. In 1891 Carl Hoffman in his "Handbuch de Papier" states Wurster's theory is correct and he publishes a great many of Wurster's researches.

Undoubtedly Wurster was the first one to study rosin sizing from a scientific standpoint. Wurster's work, however, is not entirely without criticism, but we must note at this point, that Arrhenius' dissociation theory was presented ten years later and colloid chemistry was practically unknown.

Wurster's explanations were correct in view of the present day knowledge and gave due credit to Illig's discovery and clarified many mysteries about rosin sizing. Illig and Wurster stand out as the two great names connected with rosin sizing of paper during the nineteenth century.

B. The Modern Viewpoint. 1900-1927.

The following discussion is an attempt to divide the work into several logical groups, and to summarize the various theories concerning the mechanism of rosin sizing.

The Aluminum Resinate Theory.

After Illig's brilliant work on rosin sizing had been forgotten and chemistry had advanced to such a stage that chemical reactions were beginning to be understood, it was believed that aluminum resinate was the active sizing agent, and not the free rosin as Illig had pointed out. Rudel (1859),[4] Kirchner (1873),[4] Hoffman (1875)[4] and Muller (1877),[4] the foremost writers of the day, agreed that the aluminum resinate theory was the one and only theory. This view was held in spite of the fact that there was no experimental or practical evidence for its correctness. Cross and Bevan[5] speak of a splitting of the resinates by the cellulose, after which the free rosin and the aluminum are adsorbed by the fiber. Friedlander and Seidel[6] suggest basic aluminum resinate as the sizing agent. Griffin (1905)[6] states that free rosin aluminum resinate and alumina all had a share in sizing but neither free rosin nor aluminum resinate alone are adequate.

Arledter (1907),[7] concludes from his researches that aluminum resinates are precipitated from the size by alum, these are then decomposed by the heat of the drying rolls, the resin acids melt and fill the pores of the paper causing it to be sized.

Remington, Bowach and Davidson (1911),[8] contradict the old idea that free rosin acids are the effective sizing agent (in the absence of other metallic salts and free acids, with no rosin acids being liberated), and advance the theory that aluminum resinate is the active sizing agent. They believe that aluminum resinate is undoubtedly present in more than one form or condition due to condensation or molecular rearrangement. They suggest that it is probably more or less chemically combined with the cellulose of the paper and that part of the aluminum resinates may be dissociated and extracted by ether or ethyl alcohol thus giving rise to the "free rosin" theory. Free rosin alone was not believed to be a suitable sizing agent.

The experimental work of Neugebauer (1912),[9] led him to draw the conclusion that both free rosin and aluminum resinate were found in paper since successive extractions of rosin sized paper with ethyl alcohol and ether show the presence of free rosin and of basic aluminum resinate, both of which are of value in sizing.

Zherebov (1923),[10] disagrees with the colloidal theory of Sieber,[11] Lorenz,[12] Stockigt and Klinger.[13] Zherebov,[10] makes the claim that although the sizing solution is colloidal, the active sizing acids of colophony are crystaloidal. If the union of aluminum hydroxide and rosin is merely an adsorption of one colloid on another, then the amounts of aluminum hydroxide in the combination should vary. But he states that the results of Remington,[8] Fast,[8] Heuser,[8] and Sieber,[11] show nearly the same amount of aluminum oxide—namely 4.78 to 5.69 per cent. Making allowance for variation in the acid number of different rosins, Zherebov[10] concludes that alum and rosin enter into chemical reaction and that the fact that only about 60 per cent of the alum-rosin precipitate is soluble in alcohol as noted by Sieber and Heuser also points to a chemical union between rosin and alum. According to Zherebov the rapidity of the precipitation of rosin by alum is independent of concentration and speaks against the acceptance of the collodial interpretation of this reaction.

Beltzer[14] (1924) comes to the conclusion that aluminum resinate is the most important sizing agent.

After careful investigation, Oman, (1926)[3] shows that aluminum resinate is very sensitive to acid conditions; a hydrogen ion concentration of pH 3.5 equivalent to the degree of acidity in the beater liberates a considerable proportion of free rosin. He suggests that sulfite pulp also modifies the precipitated aluminum resinate so that it is no longer completely soluble in ether, even when dried at ordinary temperatures; while the pulp after drying at 115 deg. C only yields 40-55 per cent of its total rosin on extraction with ether. Also the fact that acidification is necessary for the quantitative extraction of total rosin is cited as indicating the presence of resinates. He states that an ethereal solution of aluminum resinate as well as a suspension of precipitated neutral aluminum resinate is capable of sizing paper but gives results inferior to those obtained when a certain amount of free rosin is liberated by acidification either with alum or with sulfuric acid. The inferiority of the neutral resinate as a sizing material is ascribed by Oman as being due partly to the coarser dimensions of its particles and partly to the absence of sintering on the drying cylinders. Thus under ordinary conditions of sizing with slight acidity he believes that no important part can be ascribed to the precipitation of aluminum hydroxide on the fibers, and that if aluminum is fixed at all in acid conditions, it is in exchange for calcium ions, and it may in this manner confer on the fiber a positive charge whereby the negatively charged particles of free rosin are attracted. It must be noted here that Oman does not support the resinate theory but merely has worked with aluminum resinate. In support of the resinate theory Zherebov (1923) states that a constant ratio of aluminum oxide to resin is always noted, namely 4.78 to 5.69 per cent. The apparent discrepancy is explained on the basis of the different acid numbers of the various rosins used. Ellingson (1914) in his studies on the salts of abietic acid reports 2.93 per cent aluminum for the normal abieate $Al(C_{20}H_{29}O_2)_3$, which corresponds to 5.54 per cent of aluminum oxide.

In summarizing the aluminum resinate theory, there does not appear to be conclusive evidence of the actual existence of aluminum resinate as distinct from the adsorption complex of aluminum hydroxide and rosin in sized paper. Great stress has been placed on the solubility or insolubility of the rosin and aluminum resinate

[4] Reference taken from Oman. E. Oman, Svensk Pappers Tid. 28, 534-7, 561-3, 585-7, 611-2 (1925). Originals not obtainable at University of Minnesota.
[5] Reference taken from Oman. E. Oman, Papier-Fab. 24, No. 27, 410-13 (1926); No. 30, 451-55.
[6] M. Griffin. J. of Am. Ch. Soc., 1905.
[7] F. Arledter. Papier Ztg. 32, 773-74, 1907. C. A. 1, 1321 (1907).
[8] Remington, Bowach & Davidson. J. Ind. and Eng. Chem. 3, 466-71, 1911.
[9] E. L. Neugebauer. Z. Angew Chem. 25, 2155-9 (1912). C. A. 7, 251, 1913.
[10] L. P. Zherebov. Bumazhnaia Promphlemost, II, No. 4, 391-414 (1923). C. A. 18, 2247, 1924.
[11] Rurolf Sieber, Paper Trade J. 75, No. 15, 49-53; No. 16, 43-6; No. 17, 59-61 (1922).
[12] Ostwald and Lorenz, Kolloid-Z., 32, 119-37, 195-209 (1923).
[13] Stockigt and Klingner, Papierfabr. Fest-u-Ausland Heft, 1921.
[14] Andre Beltzer, Industrie Chimique, Industrie 59-61, 147-9, 1924. C. A. 18, 2247, 1924.

in sized paper as proof for the aluminum resinate theory. Here we must note that for complete extraction of total rosin from paper, the positively charged cellulose must become negatively charged. If the resin aluminum complex is strongly adsorbed on the fibers as is believed by Wurster,[4] Sieber,[31] Lorenz,[32] and Klinger[33] a neutral solvent should not extract all the rosin present because the fiber would still possess its original electro-kinetic charge. Actually the rosin is not completely extracted by neutral solvents. Apparently a change of charge must take place. This evidence appears to support both the aluminum resinate theory and the free rosin theory in which case it is not conclusive proof of either.

The Free Rosin Theory

This theory dates back to 1807 when Illig first described the process of rosin sizing. His explanation, which was lost sight of so quickly, was again brought to light some seventy years later when Wurster (1877)[4] published his noteworthy work pointing out that free rosin was the active sizing agent. Wurster was the first to point out that on using equivalent amounts of alum and rosin acid, aluminum resinate was formed; when a surplus of alum was used, free rosin acid and basic aluminum sulfate resulted.

The first worker to consider the cellulose as a chemically active constituent was Orioli (1878).[34] He noticed that when a solution containing 50 grams of alum was filtered through a ground cotton filter, the filtrate contained only 28 grams of alum even after repeated washings of the cotton. From this and other similar experiments Orioli concluded that cellulose had a great affinity for aluminum salts. In the light of more recent researches in collodial chemistry we easily recognize this as a colloidal adsorption phenomenon, which is explained on the basis of the negative charge which cellulose carries as contrasted to a positive charge of the aluminum hydroxide resulting from the hydrolysis of aluminum sulfate.

Schwalbe and Rossahm (1912)[35] in working with Rittner-Kellner cellulose in a small hollander, came to the following conclusions:

1—The cellulose fiber is capable of breaking down almost quantitatively the usual amounts of alum used in sizing (i.e. almost all of the aluminum is adsorbed by the fiber).

2—The resulting sulfuric acid passes into the back water which prevents the formation of considerable amounts of basic aluminum sulfate on the fiber.

3—The sulfuric acid in the backwater, at least in part, unites with organic radicals derived from the cellulose mass. No free acid is present unless the alum be in excess.

4—On treatment of cellulose with alum the calcium and the sulfate of the cellulose ash pass into the back water and the total ash is hence decreased in spite of adsorption of aluminum oxide.

5—The greater part of the aluminum oxide fixed on the fiber is not combined with rosin.

6—The presence of aluminum hydroxide is possibly of considerable importance in sizing.

Schwalbe (1912),[37] advances the theory that ink fastness of rosin sized paper is due to a precipitation of a mixture of aluminum hydroxide and free rosin, the hydroxide when dry, is in such a state that it is not soluble in the acids of the ink. He believes that the function of the aluminum hydroxide is to inclose the particles of rosin and prevent deterioration of the sizing due to atmosphere oxidation, since paper sized with rosin and sulfuric acid deteriorates very rapidly on standing. Another function of the aluminum hydroxide according to Schwalbe, is to prevent the rosin particles from flowing together on the drying cylinders.

In 1920 Arnould[38] stated that free rosin is the ultimate sizing agent, and suggests that the alum first reacts to form aluminum resinate, which in its turn is partially, or totally transformed into free rosin by the action of an excess of alum.

Stockigt and Klinger (1921)[39] assert that it is possible to size paper with colloidal rosin but only by the use of aluminum sulfate as the electrolyte, the sizing appearing to take place in two steps, (a) the formation of an adsorpton compound of rosin and aluminum hydroxide, and (b) the adsorption of this colloidal phase by the fibers.

Sieber (1922)[31] holds that it is quite possible that aluminum resinate as such is formed and that it exerts a certain sizing action on the fibers of the paper but that there is also the possibility that aluminum hydroxide adsorbs free rosin, holding it in a combination which stubbornly resists dissolution, or the hydroxide actually inclosing it in an occluded condition.

Lorenz (1923)[32] maintains that all sizes are colloidal and that, due to the large dilution in the beater, complete hydrolysis takes place, setting rosin acid free, which condenses to form collodial particles. He believes that chemical reaction such as the formation of aluminum resinate cannot occur under these conditions since rosin acids and resinate ions are only present in small amounts. He suggests that alum acts as a coagulating medium and not as a chemical agent. Accordingly with negatively charged cellulose and negatively charged rosin sol. and intimate contact such as is in the beater, the paper can be sized, but the film cracks and breaks down on aging permitting ink to penetrate the fibers, but with aluminum hydroxide the cellulose and rosin would be bonded together resulting in a permanently sized paper.

Gueritey (1923)[40] shares the opinion of Lorenz[32] that under mill conditions no aluminum resinate can be precipitated on the paper. As evidence for this belief Gueritey has shown in experiments that there is no change in the ash content of the paper before and after extracting with ethyl ether or by extracting first with 85 per cent alcohol and then with ether.

Heuser 1923,[41] differs with Stockigt and Klinger (1921) in that he claims colloidal cellulose attracts the colloidal aluminum hydroxide leaving the cellulose positively charged. The fibers then adsorb the negatively charged rosin sol resulting in sized paper. He further states that the last step takes place as a sintering on the dryer of the paper machine at a temperature of 70-80 deg. defore the moisture content falls below 50 per cent.

The colloidal-chemical studies on the rosin sizing of paper by Ostwald and Lorenz (1923)[42] led to the following conclusions:

1—That aluminum sulfate and sodium resinate are greatly hydrolyzed in the beaters.

2—That the flocculating action of electrolytes on abietic acid hydrosol is the more powerful the greater the valence of the cation, while the peptizing influence increases with the valence of the anion.

3—That the molecular quantities of aluminum, magnesium and potassium as chlorides required to produce flocculation were in the ratio of 1 : 1700 : 5000, while in the form of the sulfate they were 1 : 50 : 150.

The authors proved that pure paper pulp in water carries a negative charge as does the abietic hydrosol. Without the positive charge of the aluminum hydroxide the union of fibers and the rosin is due only to mechanical and capillary action. If too large an excess of alum is used the charge of the whole system becomes positive and the quality of the sizing is impaired. Thus according to this electrostatic theory of sizing, a most satisfactory degree of sizing is only obtained at the iso electric point, that is, when the positive charge of the aluminum hydroxide fixed in the pulp, balances the negative charge of the paper and abeitic acid.

In a later paper Lorenz (1925)[43] notes that the aluminum ions exert a coagulating effect over all ranges of concentration; with

[31] Quoted from Emil Heuser, Paper II, No. 13, 17-19. 1913.
[32] Schwalbe and Robsahm, Wochbl. Papierfabr. 43, 1454-7, 1912. C. A. 6, 2526 (1912).
[37] C. G. Schwalbe, Papier fabr. Fest-und-Auslandsheft, 62-7 (1912).
[38] E. Arnould, Papier 23, 35 (1920). C. A. 14, 1896, 1920.
[39] Rudolf Lorenz, Pulp & Paper Mag. Can. 21, 191-2 (1923).
[40] G. Gueritey, Papeterie 45, 834-7 (1923). C. A. 18, 166 (1924).
[41] E. Heuser, Svensk Paperstid. 26, 114-15, 202-5 (1923). C. A. 17, 3100 (1923).

a high concentration of rosin, especially with a large amount of alkali, a portion of the rosin is carried down with the insoluble aluminum hydroxide formed in the beater, and further, that the colloidal coagulation of the rosin-aluminum hydroxide adsorption compound depends upon the relative concentration of the rosin and aluminum hydroxide.

Oman[30] (1926) suggests that the theory as outlined by Lorenz[31] is the more logical one to explain why different amounts of alum are necessary in different mills to produce the same sizing results. He also notes that other metals such as chromium, iron, copper and zinc may be substituted for aluminum. In the same paper Oman also points out that the aluminum in the sizing bath acts as a mordant for the free rosin.

Some interesting observations were made by Arnot[34] 1925. He noted that when sized and unsized fibers were examined microscopically in the dry state, the sized fibers appeared to be coated with minute granules, and when the fibers were mounted in glycerol the unsized fiber swelled rapidly, the sized fiber slowly, while the granular coating did not increase in size but appeared to shrink. He also observed that a rosin emulsion prepared by shaking an ethyl alcohol solution of rosin with water containing a trace of sodium hydroxide exhibited a Brownian movement which ceased on the addition of alum. Arnot suggests that this would indicate that the alumina is deposited on the rosin particles.

The researches of Theriet and Deleroix (1924)[35] confirm the work of Ostwald and Lorenz[32] noted above as to the mechanism of rosin sizing. Over a certain range of pH the cellulose and rosin have electric charges of opposite signs so that the positively charged rosin and negatively charged cellulose are mutually attracted and sizing is possible. Outside of this range, the electrolyte is too acidic or too basic so that the cellulose and the rosin have charge of the same sign. Under such conditions sizing is unsatisfactory.

Cellulose and Its Relation to the Adsorption of Dyes

The adsorption of dyes by mercerized cellulose has been studied because of its especial importance in the technical application of mercerizaton. It is generally conceded that mercerized cotton has undergone little or no chemical change, the process affecting only the physical state of the fibers. This view is supported by research from various angles of approach.

Bull and Adams (1921)[36] investigated the iron-alizarin lake formation and concluded that it is a ferric oxide-sodium alizarinate complex and not a chemically combined ferric alizarinate.

Heuser 1923,[37] has aptly summarized these studies as follows: "As far as the adsorption of dyes by cellulose is concerned, the process of dyeing has not as yet been explained, as is evidenced by the different theories prevalent at the present time. It appears as if the adsorption theory based upon colloidal chemical consideration is gaining ground because the union of colloidal dye solution with colloidal cellulose follows the same laws as does colloidal chemical adsorption in other cases. The general behavior of cotton towards the different classes of dyestuffs can be considered as fairly well known. Basic and acid dyestuffs are absorbed directly but are not fixed. Basic dyes are fixed upon the fibers if these are first treated with tannin or some other mordant. The substantitive dyes which are used in the presence of salts (salt dyes) color the fibers directly, that is, they are fixed upon the fibers. Such real dyeing may also be obtained with vat dyes (indigo, indanthrene, etc.) and with sulfur dyes". The above statement by Heuser and a summary of the theories concerning the sizing of paper, indicate that the two processes have much in common. It is interesting to note that in both cases colloidal chemical explanations for known phenomenon seem to be more widely accepted in spite of the fact that certain reactions cannot be fully explaned by data at present available.

The Amphoteric Nature of Cellulose

Oman (1925)[27] noted that cellulose is ampheteric in character and that if fibers are immersed in dilute acid, hydrogen ions are taken up and hydroxyl ions are formed, the converse takes place in an alkaline medium. The iso electric point of cellulose was found to be somewhat on the acid side of neutrality. He notes that when sulfite cellulose is steeped in 0.015 N sulfuric acid, washed thoroughly and immersed in water, the amount of alkali required to bring the reaction of this water to a pH of 8 is several times as great as when the cellulose had not been previously treated with acid. Oman[27] points out that this is not due to any retention of sulfuric acid because no sulfate can be found in the alkaline solution, but ascribes it to combination of cellulose with hydrogen ions, which shifts the apparent isoelectric point towards the acid side. With sulfate pulp this effect was found to be less pronounced. Immersion in alkali had the reverse effect. He believes that since size particles are electro-negative, if the cellulose is made positive by absorption of hydrogen ions from an acid solution, combination can be made to take place without alum, but that this is not a practical process. When alum is used the aluminum is adsorbed, the cellulose becomes electro-positive, and the size is then readily combined and is fixed on the fiber. Somewhat the same situation is noted in the adsorption of dyes by cellulose.

Zherebov's Theory of Rosin Sizing

Zherebov 1923,[38] notes that rosin can be separated into two acid groups, (a) by dissolving rosin in a mixture of petroleum ether and alcohol and adding a few drops of water, and (b) by adding a prepared size to water at 30 deg. One of the groups separates as a flocculent precipitate while the other remains in solution as the soap. The petroleum ether group of method (a), or the saponified group of method (b) is light yellow, easily floating, sticky, and insoluble in aqueous alcohol. The other group, found in size as free rosin, is dark, immobile even at 90 deg. non-sticky, brittle, and soluble even in 50 per cent alcohol. Most rosins contain 35-50 per cent of the dark group. The light groups gave a well-sized paper with 3.6 per cent rosin, while the dark group shows no sizing with 9.33 per cent. The conclusion drawn by Zherebov is that the advantage of a free rosin size is not in the efficiency of the free rosin particles but is due to the dark group of acids free in the rosin which prevents them from interfering with the chemical reaction between the combined rosin and the cellulose.

In explaining the origin of this inactive dark group, Zherebov suggests: "Colophony when first obtained from rosin is a mixture of unstable chemical compounds in a state of unstable chemical equilibrium. The change to the stable condition is accompanied by the formation of rosin acids insoluble in petroleum ether and possessing a high ether number. The velocity of this change is dependent upon the size of the rosin particles. In solutions where the rosin is in molecular state, the change is extremely rapid; for a fine powder exposed to sunlight, several hours are required, and as the size of the particles are increased the required time is likewise increased. All kinds of rosin contain more or less of these stable compounds which have completed their life cycle, and which are already useless for paper sizing."

As a result of this research Zherebov arrives at the conclusion that only those rosin compounds which possess chemical activity, that is, have double bonds, are useful in sizing. He points out that the fact that paper does not lose its sizing after many years suggests a chemical combination between cellulose and rosin. According to Zherebov, the presence of ketone groups in the fiber and the double bonds in the molecule of abietic acid strengthens this view.

[30] R. Lorenz, Wachbl. Papierfabr. 56, 962-7. 1027-30, 1214-6 (1925). C. A. 20, 287 (1926).
[31] E. Oman, Svensk Papers-Tid. 29, 82-84 (1926).
[34] J. M. Arnot, Paper Maker Monthly Journal, 63, 142-9 (1925). C. A. 19, 1776 (1925).
[35] Thiriet and Deleroix, Chemie et Industrie, Special No., 567-73 (1924).
[36] Bull and Adams, J. Phys. Chem. 25, 660 (1921).
[37] E. Oman, Papier-Fabr. 23, 725-27, 745-748, 800-802, 813-816 (1925).
[38] L. P. Zherebov, Bumazhnaia Promphlenost 2, No. 1, 59-77 (1923). C. A. 18, 1197 (1924).

If the above viewpoint is correct, it should be possible to satisfactorily size paper with a very low percentage of pure abietic acid.

The Effect of Hydrogen ion Concentration

It has long been known that mineral acids will precipitate rosin size and it is also well known that a permanently, well-sized paper does not result except when alum is used as a precipitating agent (with a possible exception of chromium alum). Various workers have shown that there apparently is no satisfactory substitute for alum.

Ostwald and Lorenz (1923) [29] have shown that the precipitating power of aluminum and magnesium as chlorides is in the proportion of 1:1700 whereas it is 1:50 for the sulfate. It is evident that there can be no saving in using the chlorides. The use of free mineral acids is always questionable when the system comes in contact with the metal of the beaters and of the paper machine. Experience has also shown that free acids have a deteriorating action on the finisher paper. In the use of limited amounts of hydrochloric acid in sizing, sodium chloride would be formed by double decomposition of the size and the acid.

In this connection, Arnould (1921),[30] has shown that the presence of 0.043 per cent of sodium chloride in the pulp may completely prevent sizing by the usual rosin-alum method. From the above considerations, it is difficult to understand how there might be a saving in using chlorides or hydrochloric acid as substitutes for a part of the alum. However, there appears to be no reason why sulfuric acid could not be used provided that the amount was limited to the quantity required to neutralize the alkalinity or hardness of the water before adding the alum. The use of such an acid would necessitate careful control to avoid an excess.

Apparently the first workers to consider hydrogen ion concentration an important factor in rosin sizing of paper was Theriet and Delacroix (1924) [31]. They state that for the best results sizing should take place in a bath whose pH is 4.5 to 5.0. Their hypothesis is that over a certain range of pH (4.5 to 5.0) the cellulose and rosin have electric charges of opposite signs, so that the positive rosin and the negative cellulose are mutually precipitated and sizing is possible. Outside of this range the electrolyte is too acid or too basic, the rosin and cellulose have charges of the same sign so that sizing is incomplete.

Shaw (1925),[32] has published some interesting work on the amounts of alum necessary for producing well-sized paper. He observed that maximum precipitation of alum occurred at pH of 5.04 to 5.5 depending on the parts per million of alum used. By regulating the pH of the stock in the beater after precipitating the size, the alum consumption in the mill was reduced by 33 per cent. Shaw states that an excess of alum over that required to produce the pH value of 5.0 to 5.5 apparently has no favorable effect on the quality of the paper sizing.

Roschier (1926),[33] reports that the maximum adsorption of fillers in paper occurs at a pH of 5.6 and remains constant from 5.6 to 7.0. This figure is no doubt, closely related with the maximum adsorption of size by the fibers.

Miscellaneous Observations

An unknown author [34] writing in Papier fabrikant (1914) ascribes great importance to the calcium content of the pulp in sizing. The claim is made that the adsorption of aluminum by the fiber is in direct proportion to its calcium content. Oman (1926) [35] arrives at the same conclusion in his experiments while Schwalbe (1926) [36] emphatically denies such a reaction in sizing. Schwalbe maintains that the degree of hydration of the fibers has a greater effect than the ash content.

Heilmann (1927),[37] points out that a poorly sized paper to which enough rosin size has originally been added to size it well is greatly improved when heated for a minute at 105 deg. C. Klemm (1908) [38] notes that rosin sized paper should be dried in such a manner that the greatest heat is applied while the paper is moist and the temperature decreased as the paper becomes dry. He has found that when examined microscopically, an air dried sheet of rosin sized paper will show grains of size lying on the fibers and fitting in the interstices, while a sheet heated while wet shows the size forming crusts around the fibers and cementing them together. In a later paper Klemm (1923),[39] states that "fritting" (incipient fusion of the size in the wet causing the particles to coalesce and forms a continuous impervious film) takes place at 70 deg.-80 deg. C before the moisture content of the sheet falls below 50 per cent.

This same view was expressed by Heuser at an earlier date (1923) [11] in which the fusion of the rosin was called "sintering".

According to Sutermeister (1921) [40] the sizing value of rosin increases in passing from the darker to the lighter grades. This is what we would expect if the work of Zherebov (1925) [26] who has shown that the active sizing agent in abietic acid, is correct.

Historical Summary

In briefly reviewing the various theories concerning the mechanism of rosin sizing, one is impressed by the lack of fundamental research in most instances. A great deal of the work which has been reported is based on observations made in a paper mill rather than being drawn from fundamental researches where all possible factors are kept under control.

The fact must not be lost sight of that while plant observations undoubtedly contribute valuable suggestions, nevertheless it is through exact studies under carefully controlled conditions that our knowledge of the exact mechanism of rosin sizing will be most rapidly advanced.

The workers studying the problems of rosin sizing have not the same materials. In the light of the present investigation we obtained the same results when working with what appears to be must conclude that this is what might be expected. The origin of the pulp, the treatment it received in the pulp mill and in the paper mill, the ash content, and the conditions under which it is sized all have a large influence on the resulting sheet. The "cellulose" of one worker may not be the "cellulose" of another. Cellulose is a bio-colloid and as such is more reactive and more readily changed than is generally recognized. Workers who have not duplicated the exact experimental conditions of others cannot hope to obtain the same results. Again, the conditions that appear to be ideal for one kind of pulp may not be suitable for obtaining the best results when another kind of pulp is used.

Great emphasis has been placed on the presence or absence of aluminum resinate in paper, but as yet there is no method whereby we can differentiate between a resinate and an aluminum hydroxide-rosin complex. Until the presence of aluminum resinate as a chemical compound can be established, the aluminum resinate theory cannot be unconditionally accepted.

Recent investigations of Weiser and Porter (1927) [41] indicate without much doubt that the iron-alizarin lake formation is a ferric oxide-sodium alizarinate complex and not chemically combined ferric alizarinate.

When the physical and colloidal chemists units their efforts to study rosin sizing it is predicted that rosin sizing will be found to be primarily a colloidal phenomenon and not a classical chemical action as is believed by those who support the aluminum resinate theory, in other words, the cellulose will be found to play a much greater role than is usually ascribed to it.

[29] E. Arnould, Papier 24, 108-10 (1921). C. A. 15, 1810 (1921).
[30] M. B. Shaw, Paper Trade J. 81, No. 10, 59-62 (1925).
[31] H. Roschier, Papierfabr. 24, Tech. Wiss Teil, 348-50, 363-5, 384-8 (1926).
[32] Anon. Papierfabr. 12, 963-8, 975-80, 987-91, 999-1000 (1914).
[33] E. Oman, Papierfabr. 4, 49-58 (1926).
[34] C. G. Schwalbe, Papierfabr. 10, 142 (1926).
[35] S. Heilmann, Papier Ztg. 32, 311 (1907). C. A. 1, 1322 (1907).
[36] P. Klemm, Wochbl. Papierfabr. 39, 1369. C. A. 2, 2449 (1908).
[37] P. Klemm, Paper 31, No. 13, 11-14; No. 14, 11-13 (1923).
[38] E. Sutermeister, Paper 27, No. 13, 22-3 (1921).
[39] Weiser and Porter, J. Phys. Chem. 31, 1383-99, 1704-1715 (1927).

A Mill Scale Demonstration of Temperature Control in Sulphite Pulping

By G. H. Chidester [1]

The studies of Miller, Swanson, and Monsson at the Forest Products Laboratory have effectively shown the advantages in following definite temperature schedules to obtain optimum yield and quality of sulphite pulp. The present paper describes attempts made to apply this control of temperature on a full scale in a commercial sulphite mill.[2]

The investigations at the laboratory have shown that the rate of increasing the temperature during the cooking operation is the most important single factor affecting the yield and strength of the pulp. In following a temperature schedule, the first step is a thorough penetration of the chips by the acid before reaching 110° C., the point at which pulping action begins at an appreciable rate. If the penetration has not been complete before reaching 110° C., hard, brown centers in the chips will result; the lignin, or cementing material being rendered insoluble, thus making subsequent pulping difficult. Spruce chips 5/8 inch long require about one hour for complete penetration by the acid in a small semi-commercial sized digester. In a large sulphite digester, however, where neither the size of the chips nor the temperature is uniform, it is well to allow at least two hours for bringing the digester to a temperature of 110° C. If a temperature of approximately 135° C. is obtained before the pulp has reached a certain degree of delignification, the cellulose as well as the lignin is attacked, and the yield of pulp is reduced. Also it is important to keep the final temperature of the cooking period as low as possible since high temperatures may reduce both the strength and yield of pulp. If the same temperature curve is followed for every cook, the pulp will necessarily be of uniform quality, other conditions being fairly constant.

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[1] Assistant Engineer in Forest Products, U. S. Forest Products Laboratory, Madison, Wis.

[2] Acknowledgment is made to Vance P. Edwardes, former member of the staff of the Forest Products Laboratory, who had charge of the work herein reported.

Mill Operating Conditions

The mill in which the work was done required an output of 80 tons of spruce and eastern hemlock pulp each 24 hours from three digesters of a capacity of 12 tons each.

Spruce and hemlock logs of good quality in addition to spruce and hemlock slabs were supplied to the pulp mill. The chips from the logs were of good quality, but those from the slabs contained about 15 per cent of fine material of a quality of coarse sawdust which fact had an important bearing on the cooking control.

Most of the hemlock was cooked for bleaching. The spruce pulp was used for various furnishes, some being bleached. The quality desired might be called "semi-easy-bleaching."

The cooking acid averaged about 4.50 per cent total, 3.30 per cent free, and 1.20 per cent combined SO_2. The average cooking time was 8½ hours. The completion of the cook was determined by the color and odor of the liquor, and analytically by the total SO_2 content of a hot sample titrated with standard iodine solution. For easy-bleaching pulp, the cook was held to a very dark-color, the sample sometimes giving off a slight odor of burning. A digester pressure of 65 pounds was used.

Fig. 1 shows several temperature curves taken at random from previous cooks. The temperature differs as much as 30° at the end of the fourth hour, and as much as 10° at the end of the cook. Since temperature is very important in controlling yield and quality, it is small wonder that varying results were obtained. Considering the previous work the lowest curve (No. 20) might be expected to give a slightly raw pulp with good yield and

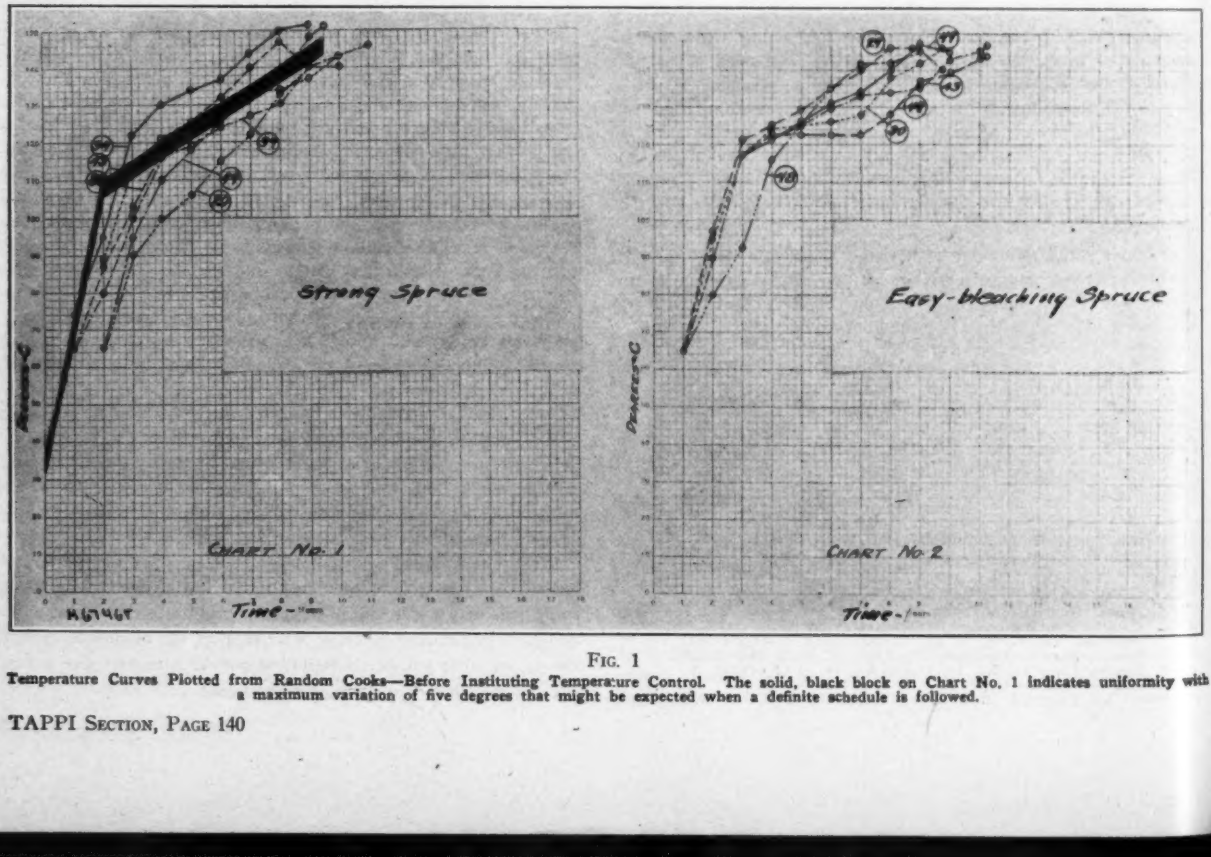


FIG. 1

Temperature Curves Plotted from Random Cooks—Before Instituting Temperature Control. The solid, black block on Chart No. 1 indicates uniformity with a maximum variation of five degrees that might be expected when a definite schedule is followed.

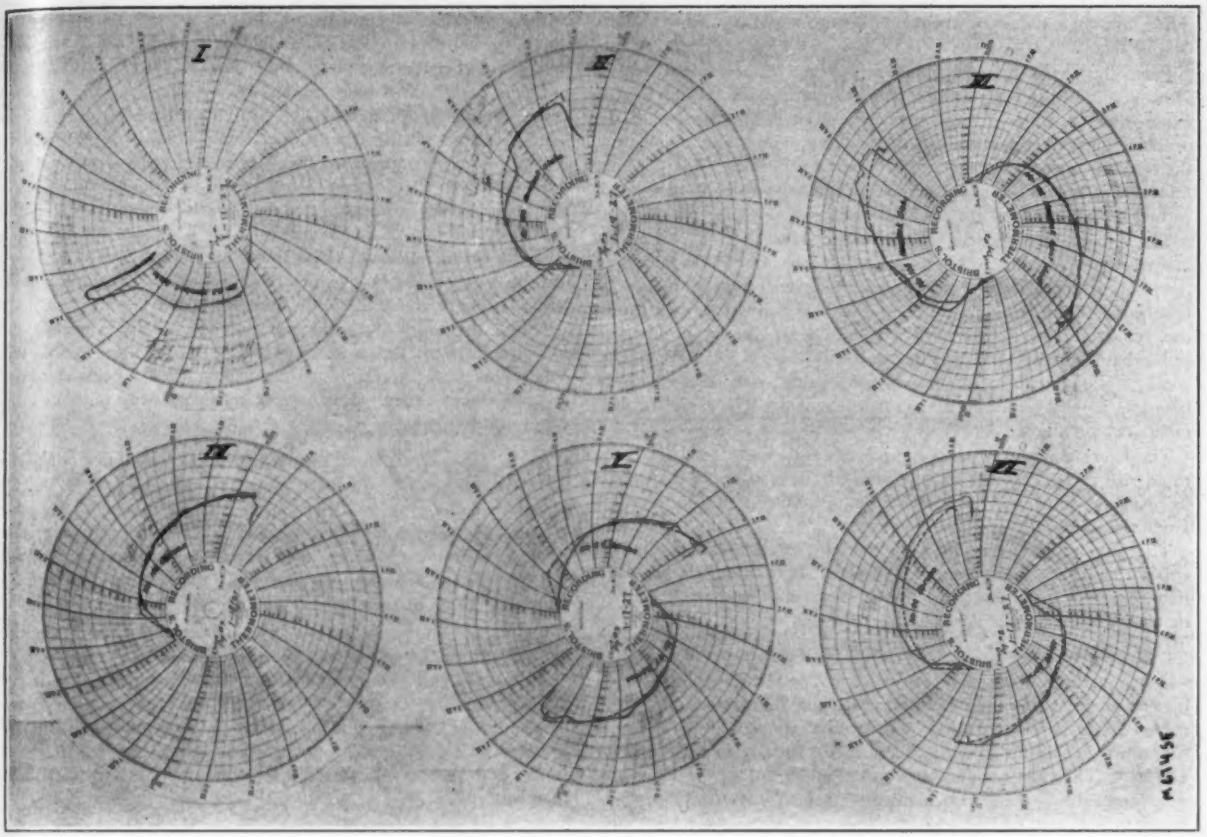


FIG. 2

Recording Thermometer Charts. Recorded Temperature —— Desired Temperature ----

strength (long period of impregnation to 110° C., and short cooking period) while the highest curve (No. 34) might be expected to give a high percentage of screenings and a low yield (short impregnating period, and high final temperature). The solid, black block in the diagram indicates a uniformity with a maximum variation of five degrees, that might be expected when a definite temperature schedule is followed.

The temperature curves taken from the easy-bleaching pulps show less difference at the beginning, but enough difference later to considerably effect the yield and quality of the pulp.

It was impossible to get an accurate measure of the pulp yield and of the amount of screenings. The latter, however, from figures over a long period was estimated at about 6 per cent of the pulp production.

In cooking hemlock slab wood it was sometimes noticed that the temperature would remain constant for two or three hours, and then rise from 10° to 30° C. in a very short time. An illustration of this condition is shown in Chart 1, Fig. 2. Since the digester was relieved steadily during the time the temperature remained practically constant, a logical explanation seemed to be poor circulation, due partly to the comparatively large amount of fine material in the chips, and partly to the weak acid. Further the thermometer well might have been surrounded with chips and fine material which prevented free circulation of the liquor. When the mass was finally broken up, which often occurred just before opening the blow-valve, the hot liquor perhaps reached the thermometer and caused the rapid temperature rise indicated on the recorder chart.

Application of Temperature Control

To give assurance that the temperature readings were correct, the recording thermometers on each digester were calibrated before any attempt was made to follow a temperature schedule. The temperature curves were then laid out with the corrections made. Templates were cut out in the form of the curves which were marked out for each cook on the thermometer chart before the cook was started.

It was decided that the desired production would not allow the lengthening of the cooking time more than one hour, namely, from 8½ to 9½ hours. The temperature curve chosen for spruce reached 110° C. in two hours, thence followed a straight-line rise to 146° C. in 7½ hours more. The curve chosen for hemlock reached 110° C. in 2 hours, 120° C. in 3 hours, and then a straight-line rise from 120° C. to 149° C. in 6½ hours more. The temperature control was begun with Cook No. 72. Thereafter nearly all of the different forms of pulp wood previously mentioned were used.

In order that the digester operators might become accustomed to following the temperature curves and to avoid danger of "boring", or channeling and poor circulation resulting from a too rapid admission of steam, the digesters were first brought to 110° C. in the usual manner. They were then started on the temperature schedule from 110°. Eleven-hour cooks resulted which produced pulp of low bleach requirement and high strength.

After the men had become accustomed to following the temperature curves, it was found possible to reach 110° C. in two hours by steaming carefully at the beginning. Once proper circulation was established it was possible to steam rapidly enough to bring the temperature up without difficulty. The cooking time was, therefore, shortened an hour and a half, resulting in a total cooking time of 9½ hours. The completion of the cook was determined with the color and odor of the liquor as the chief

guide, although titrations with iodine were made on a hot sample of the liquor.

Particular care was necessary to keep the strainers clean. However, with the digester working properly no difficulty was experienced in following the temperature curve, relieving the gas pressure during the last part of the cooking period, and completing the cook on time. (Note charts 3, 4, 5 and 6 Fig. 2.) The guiding lines marked from the templates are shown broken while the actual recorded temperatures are shown solid.

The circulation difficulty with hemlock slabs (see chart 2) was not entirely overcome. When this trouble occurred it was sometimes necessary to follow the digester top temperature which was usually 8° to 10° C. higher than the side temperature. Pulps of the same bleach requirement as before were produced when a somewhat lighter color was obtained at the completion of the cook. Following the straight line temperature rise resulted in an increase in the strength of the spruce cooks (Nos. 88 to 101 inclusive) on Figure 3.

The exact amount of screenings produced by the comparatively rapid rise to 110° C. was not determined. It is possible that some were made; however, the total amount was reduced considerably from that with the previous practice.

The pulp produced by this method of cooking seemed slightly softer than that which might be expected. It is therefore probable that the average temperature of the digester was slightly higher than that indicated by the side thermometer.

Results

After instituting the temperature control, the amount of screenings as measured by the number of carloads delivered to the edge-runners, was reduced one-half. In a week, this corresponded to a saving of pulp in an amount equivalent to the production for one digester. The time required to run the stock out of the blow pits was increased by 15 to 30 minutes. As nearly as could be conservatively estimated, the yield of pulp was increased by at least 5 per cent without additional cost either of raw material or labor. This amounted to 24 tons in a week, or an equivalent of the production of two digesters.

At $60.00 a ton the monetary saving in pulp during one week from the reduction in screenings alone amounted to $720.00 and the increase in the yield of fiber in cooking to about the same amount. The total saving in one week was then about $1440.00.

The quality of the pulp as measured by bleachability and strength are shown in Fig. 3. These data were furnished by the mill chemist from tests made on individual cooks before and after instituting the temperature control. Although uniformity was shown for short periods (Cooks 118-133, 143-157), wide variation is shown at other times (Cooks 1-30, 54-72), before instituting the control. Later uniformity is shown by the flattening out and separation of these curves. The straight, solid lines are arbitrary limits set for uniform mill operation. For hemlock pulp the strength as determined by the Mullen tester was limited to a range of .65 to .75 points, and for spruce pulp to a range of .75 to .85 points. The arbitrary limits for the amount of chlorine absorbed were set at 5 to 6 per cent for hemlock, and 4 to 5 per cent for spruce although these limits are lower than is ordinarily met in mill operation. A bleachability below the limit coupled with a strength above the limit, however, are seldom objectionable, although they indicate some non-uniformity. The upper limits for strength and the lower limit for bleachability should serve only as a guide in obtaining uniformity. All values within the limits indicate entirely satisfactory uniformity of mill operation.

Recommendations

Aside from the actual time-temperature schedules, improving the circulation in the digesters was the chief object of the final recommendations made. Circulation is of prime importance both in obtaining correct temperature readings and in producing a uniform temperature to give a uniform cooking action. Without proper circulation, wide variations in the quality and yield of pulp will result in spite of attempts at temperature control.

Important factors affecting circulation were: The excessive amount of fine material resulting from hemlock slabs, the low "free" acid, and the relieving and steaming methods. Recommendations were therefore made to investigate types of chippers more suitable for slab wood, to increase the amount of "free" SO_2 in the acid, to use side relieving for improved control of the dry relief, and to use side steam inlet nozzles for better distribution of steam.

Luncheon to C. S. Beaumont

On Friday, October 5, C. S. Beaumont was a guest at an informal luncheon tendered by TAPPI at the Chemists Club in New York City. Mr. Beaumont, formerly with the Empire Paper Mills at Greenhithe, England, and now with Lyddon & Co., Ltd., London, England, has been visiting mills in Canada and the United States and attended the fall meeting of the Technical Association at Wausau. Those in attendance included Frederick C. Clark, R. S. Kellogg and R. G. Macdonald.

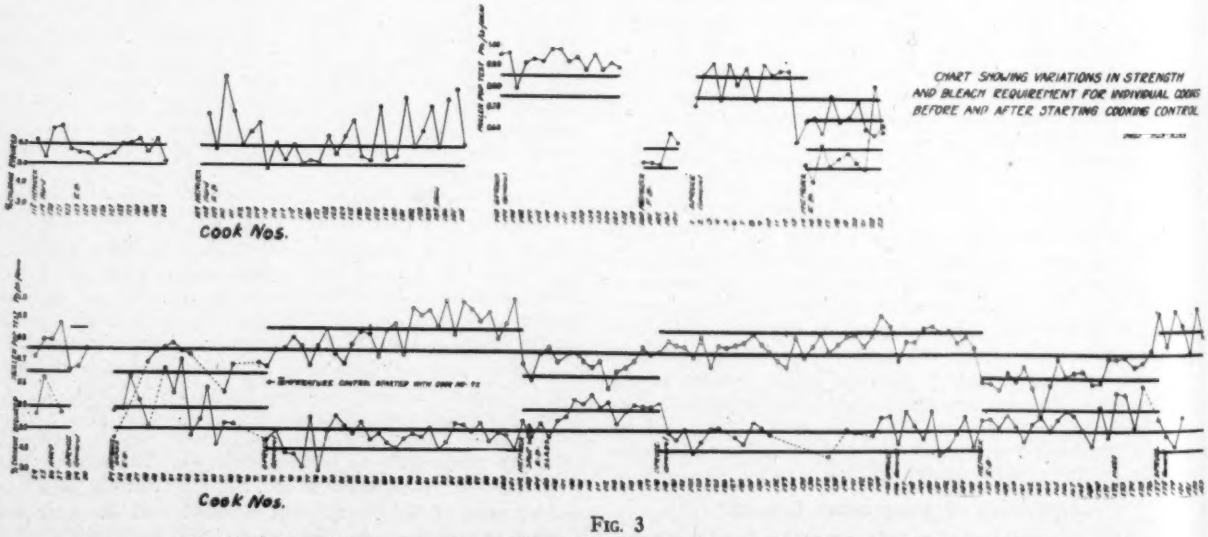


CHART SHOWING VARIATIONS IN STRENGTH AND BLEACH REQUIREMENT FOR INDIVIDUAL COOKS BEFORE AND AFTER STARTING COOKING CONTROL
Cook Nos.
Cook Nos.

FIG. 3

Chart Showing Variation in Strength and Chlorine Requirement Before and After Instituting Temperature Control

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Conducted by THOS. J. BURKE, C.A., Sec-Treas

Cost Association Plan for Organization

Of Pulp and Paper Industry on a Sound Cost Basis

"While our industry and commerce must be based upon incentive to the individual, yet the national interest requires a certain degree of cooperation between individuals in order that we may reduce and eliminate industrial waste, lay the foundation for constant decrease in production and distribution costs and thereby obtain the fundamental increase in wages and standards of living."—HERBERT HOOVER.

The above statement stresses the following points:

1—Industry requires reasonable profits.
2—Industrial units must cooperate to eliminate waste.
3—Production and distribution costs must be reduced.

Each point directly affects the other. They are points we are all agreed on. Why then cannot we adopt a definite plan to carry the following resolutions into effect:

1—We will make a reasonable profit.
2—We will eliminate waste.
3—We will reduce our production costs and distribution expenses.

Profits

What is a reasonable profit?

In an industry such as ours, involving considerable risk and a big outlay, it is from 12 per cent to 15 per cent per annum on the "Capital Employed." Not the "capital invested," the "capital employed," which is to say, that that profit should be made on all capital used in the business. For instance, to borrow money through a bond issue or mortgage at 6 per cent per annum, and to figure that interest as a cost item is incorrect. The money thus borrowed should be added to the capital invested in the business and a profit of 12 per cent to 15 per cent on this total capital employed should then be made.

It is necessary to know the ratio of the total annual sales to the total capital employed thus:

Total annual sales		$2,000,000
Capital invested	$1,000,000	
Bonds issued	500,000	
Total capital employed		$1,500,000
Ratio of sales to capital employed		4 to 3
Profit required on capital employed		12% per annum
Profit required on sales (¾ of 12)		9%

In other words, 9 per cent on $2,000,000 sales will return 12 per cent on $1,500,000 capital employed ($180,000). 12 per cent on capital "invested" is $120,000. 6 per cent interest due on bonds is $30,000, leaving $30,000 available for amortization of bonds.

Statement would then read:

Net operating profit	$180,000
Less—Interest on bonds	30,000
Net profit for year	$150,000
Bond sinking fund	30,000
Available for dividends	$120,000

We do not believe that adding interest on investment into the costs or interest on borrowed money into costs is of any help in making a reasonable profit. There must be a determination that such a profit shall be made, which necessitates a clear understanding of the methods used to allocate the costs and expenses incurred to the different products. No matter where the capital employed is obtained, there is a liability connected with it and this liability must be met out of the Net Operating Profit. The responsibility is to make that reasonable profit and whether this profit is distributed in the form of interest or dividends should make no difference to the executives' responsibility for making the profit.

Let us now examine the above example to see what difference it would make if we decided that all we wanted to do was to make 12 per cent on our investment, after paying 6 per cent interest on bonds:

Ratio of sales to capital invested	2 to 1
Profit required on capital invested	12% per annum
Profit required on sales to make 12% on capital invested (½ of 12)	6%
Profit required on sales ($2,000,000)	$120,000
6 per cent interest on bonds $500,000	30,000
Total Annual Profit Required	$150,000
Ratio of profit required on sales	7½%

That is to say, that if the annual payment of $30,000 to the Sinking Fund is to be set aside out of the 12 per cent profit, the

profit required on Sales would be only 7½ per cent instead of 9 per cent. The question raised is whether the consumer is to get the benefit of the fact that capital is secured on mortgage at 6 per cent, instead of being subscribed. Nothing is then charged for the risk involved in this procedure.

We believe it is sound reasoning, that money borrowed should be added to the capital invested and that a reasonable profit should be made on the total capital employed in the business. By adding interest of any kind to the costs, they are improperly inflated and the issue confused because in figuring the profit to be added, an allowance must be made for the profit already included. How does the inclusion of such interest add anything to a determination to make a reasonable profit or how does it make it more possible to do this?

2—Cooperation to eliminate waste. *3—Reduction of production and distribution costs.*

The causes of wastes in pulp and paper mills are fairly well known, but the possibilities for eliminating them are not so well understood. We believe a great impetus would be given to this elimination if more mills were able to make cost comparisons on a standard basis. That is to say, if the methods used to cost their products were identical, it would be possible for groups of mills making identical products to compare their costs and the group as a whole would be greatly benefited as a result of this cooperative effort. An examination of such a compilation for instance, would disclose that Mill A was using considerably more raw materials than Mill D, while Mill D was using more power than Mill C, and Mill C's labor costs were higher than Mill B, etc. Thus each would have its attention drawn in a forcible manner to its inefficiencies of operation.

It is the business of the Cost Association to promote the use of better accounting and cost methods in the industry. Most mills now have some kind of cost system in operation, but many of them differ in their methods. Our objective is to standardize these methods for mills which can be segregated into at least ten distinct groups. Our publication, "A Budget Cost System for Paper Mills," has laid down what we consider fundamental to a good cost system, and this can be used as a basis for building up the plan to be outlined.

Cost Association Plan

To get results, we require the support of the executives of the industry. Not alone their financial support, but their interest and cooperation in our work. Our plan therefore, contemplates the formation of a Committee of Executives, which will be responsible for financing the work of the Association and for formulating the policies to be adopted by the Association in carrying on its work. This committee should meet at least twice yearly, and make decisions on reports from the secretary-treasurer and the other committees, such reports to be submitted in writing to each member of the executive committee at least 10 days prior to such meetings.

The actual work of the Association should be directed by an Accountant's Advisory Committee of not less than five or more than ten, which should meet at least four times yearly, or as often as necessary to attend to business. It will be the business of this committee to examine and co-relate reports received from the various committees, appointed for the purpose of carrying out specific pieces of work. It is suggested the following should be standing committees:

1—Fixed Assets Committee.
2—Raw Materials and Supplies Committee.
3—Steam and Power Committee.
4—Labor Committee.
5—Selling Expenses Committee.
6—Joint Cost and Technical Committee.
7—Committee on Local Divisions.

1—Fixed Assets Committee

It shall be the duty of this committee to make an investigation of:

A—The various methods of accounting for fixed assets.
B—The annual rates now being charged for depreciation and obsolescence of fixed assets.
C—The methods being used to incorporate the depreciation and obsolescence cost in the manufacturing costs.

Having concluded its investigation the committee will:

A—Design a plant ledger for use by pulp and paper mills.
B—Draw up a list of rates to be used as a standard or guide in setting rates for depreciation and obsolescence.
C—Draw up a statement covering the pro-rating of the annual depreciation and obsolescence cost to the various operating centers, so as to show the best method of doing this.

2—Raw Materials and Supplies Committee

It shall be the duty of this committee to draw up a report covering the best practice for accounting for all raw materials and supplies used by pulp and paper mills.

The report should include recommendations as to the treatment, from an accounting viewpoint, of "broke" and waste of all kinds.

3—Steam and Power Committee

It shall be the duty of this committee to draw up a report covering the best practice for accounting for steam and power costs and their allocation to the respective consuming units.

4—Labor Committee

It shall be the duty of this committee to draw up a report covering the best practice for accounting for labor costs of all kinds. This report should include not only details as to compilation of pay-rolls, but a clear cut statement as to the best method of analyzing pay-rolls so that the labor costs may be properly absorbed and allocated to the various products manufactured.

5—Committee on Selling Expenses

After making an investigation of the various methods now being used by pulp and paper mills to dispose of their products, it will be the duty of this committee to draw up a report illustrating the accounting practice to be followed in accordance with the selling methods used.

6—Joint Cost and Technical Committee

It shall be the duty of this committee to establish closer working relations with the Technical Association, for the purpose of assisting the other committees in working out problems involving technical knowledge.

7—Committee on Local Divisions

This committee should consist of one representative from each Local Division of the Cost Association, which should be established in each paper-making center in the country. The following general divisions are suggested:

1—Berkshire
2—Connecticut Valley
3—Eastern
4—Michigan
5—New York City and District
6—Northern New York
7—Ohio
8—Pacific Coast
9—Southern
10—Wisconsin

This committee should meet at the time of each semi-annual convention, and draw up a report covering the work done in each division, to promote the work of the Cost Association.

Such reports should state the number of meetings held, the number in attendance at each meeting, the problems discussed,

and members secured for the Association by each division. It will be the duty of this committee to arrange for bringing before the industry generally, the reports of the work done by the standing committees in such a way, as to permit of full discussion and explanation. These divisions should form an integral and important part of the Association's machinery, for keeping in close touch with the accountants of the industry during the periods between the dates of the semi-annual conventions. Monthly meetings should be arranged and everything possible be done to get the local accountants to attend regularly.

Group Committees

As reports of the standing committees are approved by accountants advisory committee, they will be submitted to committee of executives and through them brought to the attention of the various trade associations in the industry. They will be published in loose-leaf form in flexible binders, so that later, revisions can be made by substituting pages where necessary. When the work of all committees has been completed, new committees of five will be appointed representative of each group in the industry, as follows: 1—Absorbent; 2—Boards; 3—Building; 4—Cardboard; 5—Cover; 6—Printing (Book); 7—Tissue; 8—Wrapping; 9—Writing.

These divisions (with the omission of news) are in accordance with the classification of papers drawn up by the Technical Association. It is possible that a different classification may be necessary to meet the desires and needs of the industry.

It will be the duty of these group committees to draw up recommendations and arrange for the adoption within their group on a uniform basis of the principles and practices laid down in the reports drawn up by the standing committees. Disagreements will be submitted to the Accountants Advisory Committee for settlement, while disputed questions of a technical nature will be settled by the Joint Cost and Technical Committee.

When the report of each of the group committees is finally completed, it will be submitted to the Accountants' Advisory Committee for final approval, and adoption as standard accounting practice for that particular group. Through the executive committee it will then be submitted for approval by the trade association representing that group (if any) and on approval by that association, will be published in loose-leaf form by the Cost Association.

Installation of Cost Systems

As far as possible everything will be done through group meetings, conventions, local division meetings and correspondence, to make it possible for each mill as necessary to revise its own accounting system, to bring it into accord with the uniform or standard plan. However, doubtless in many cases, it will be found advisable to arrange for outside accountants to carry out installation work, where revision or radical changes may be necessary. To this end, the Cost Association contemplates establishing closer working relations with the public accountants of the country.

In the past the trouble has been that different accountants (public and otherwise) have had different ideas regarding cost systems and plans. That is one reason why we contemplate carrying out such careful investigations before making final recommendations, which we believe will then receive thorough endorsement by the executives. Having once formulated a definite plan for each group, installation difficulties and expenses should be greatly reduced, outside help only being required to take care of the increase of work caused when making the necessary changes. Once these have been completed, it will often be found that the clerical labor will be reduced rather than increased, while the amount and value of the information available will be greatly increased.

It will be our endeavor by working with such organizations as the American Institute of Accountants, to have the public accountants of the country endorse our plan for accounting procedure, so that wherever an accountant is called on to make an installation, it will be made in accordance with the plan formulated by the Cost Association. In many cases, however, it will be found that much of the necessary information is now available and that such changes as are necessary, can be made without very much difficulty.

Full Co-operation of Executives and Accountants Essential

That, in brief, is an outline of the Cost Association plan, one whereby committees will first work on broad fundamental bases, but whose findings will later be refined to meet the requirements of the different groups within the industry.

Just as no mill can run without power, so no plan to rectify unsound cost accounting and estimating procedure in an industry can succeed without financial support from the executives and co-operative support from the accountants.

It Is Possible to Obtain This?

We believe it is, if the scheme is properly sold to the industry and the benefits, which will accrue to the industry, if the plan is carried out in its entirety, are fully understood and appreciated.

Imagine for a moment (at present it's difficult to do so for longer) that every tissue mill in the country was compiling its costs on exactly the same basis; that they all had plant ledgers, that they were all charging depreciation and obsolescence into their costs on a correct basis, that they were making correct allowances for wastage and shrinkage, that their steam and power costs were being properly distributed; and then imagine that each week each mill as well as reporting its shipments, inventories, orders and production also reported its true production costs *on a comparable basis.*

It's hard to imagine because so many executives believe it cannot be done. The best answer to that is, that it is being done and in industries whose difficulties as far as ascertaining correct costs are concerned, are every bit as difficult as ours. Again, some executives believe in elimination rather than co-operation, elimination of profits, elimination of competitors. The trouble is, the competitors are never eliminated; when one goes broke another takes his place at 50 cents on the dollar and something is lost rather than gained. Competition is still the life of trade *but it should be a Competition of Costs.* There's no law against comparing costs, but you cannot compare them unless you use identical cost systems. You must not agree on a rate of profit and you must not agree that some particular operation costs a certain amount. You *can* agree on cost methods provided these are in accordance with sound accounting practice, and having done this, you can compare these costs and see where you are, in comparison with the others, those with new up-to-date mills, and those with older, slower machines. The results of such regular comparisons will be, undoubtedly and naturally a slow narrowing of the cost differences, a sure slow stabilization of prices, and increased efficiency of operation, an all-round healthier tone to the business, because everybody will be in possession of the facts regarding the costs, and thus will not believe every lying rumor running around regarding what the other fellow can make it for.

The writer is not a salesman. Perhaps some of our readers who are and who believe in the possibilities of the Cost Association plan outlined above, will write in a few letters to be published in our next issue, which will help in selling the idea to the industry in general. Whatever else is said, the fact remains, the more facts available about a business, the easier it is to run that business to the best advantage. The Wright Brothers succeeded because they *started* out with all available facts about flying. Let's quit talking about "Profitless Prosperity" and formulate plans to start a period of "Profitable Production," in an industry, which after all, is making products which are essential to the well-being and commercial life of the country. Reasonable co-operation plus the expenditure of a small amount of money annually, is all that is needed to develop facts that will have a far-reaching effect in reducing unprofitable competition to the vanishing point, and in finally organizing our industry on a sound cost basis.

COST SECTION

Souls and Pottage

By Thomas J. Burke, Sec.-Treas., Cost Association of the Paper Industry

Weekly I receive through the courtesy of the United Typothetae, a copy of their excellent periodical the "Typothetae Bulletin" and weekly my pleasure in reading it is ruined by advertisements published by a certain paper company, in the Middle-West. This advertisement, which of course, is read by thousands of printers and others throughout the country, stresses *the fact that 15,000 printers in this country every week* receive from this paper company, samples of what are called "mill jobs of paper", which are said to be papers made as a result of *errors made in paper mills*. This paper company further claims, that the mills lose from one third to one half on the cost of the paper stock, and that as national distributors, they pass this "sacrifice" along to the printers of the country. Competition is pictured as a devil and the printers are recommended to give the devil's tail a twist, by taking advantage of this operating inefficiency on the part of the mills.

Several Thoughts Suggested

Now several thoughts arise after a careful reading of this advertisement by anyone at all conversant with the conditions at present existing in the pulp and paper industry, and interested in its welfare. They are:

1—Are the facts as stated correct?

2—If incorrect, how can this company continue to publish these statements and sell its papers in competition with regular lines, unless its prices are actually below other prices?

3—If correct, are not these statements a drastic indictment of the manufacturing inefficiency of the mills supplying this distributor, which carries stocks in every division of the country.

That mistakes are sometimes made in running special orders is true, but that they are so extensive that 15,000 printers can be regularly supplied with stock from the results of such errors would appear to be a matter of considerable concern to our industry.

The question is raised, are we selling our souls for a mess of pottage? Has an industry a soul? After eight years in the paper industry the writer believes it has, for it is continually striving for better things against very great odds. There is a keen and growing desire to give better service, to help the distributor, to help the printer and lately to serve the public. In spite of a surplus productive capacity of 20 per cent or more in every grade, new and improved machines are constantly being installed, research of every kind is being carried on, technical men are working seriously to improve ways and means of better serving the printer and the public. For what? The cynic answers for profit. But what are the facts? The facts are that profits are declining, not increasing. The cynic answers again, that that is due to poor management and not to any high ideals caused by the possession of a soul.

That's where the argument starts, because there is enough truth in the statement to warrant a careful consideration of the underlying facts.

Governed by Highest Ideals

We must admit there are poorly managed mills, but we can also truthfully state that there are a number of executives in this industry, who are governed by the highest ideals in the conduct of their business. On the face of it then, our cynical friend is partly correct, but does not disprove our belief that an industry can have a soul or can in other words, strive constantly to upbuild the ethics and business ideals by which the highest types of business are now governed.

Having settled then, at least, to our own satisfaction that our industry has a soul, our next consideration is, are there certain members of this industry who are selling their souls for a mess of pottage? In other words, either through manufacturing inefficiency or through a mistaken idea that paper should be sold entirely on a price instead of a quality basis, are there manufacturers who are deliberately giving their paper awaybelow cost and thus enabling 15,000 printers to receive circulars weekly advising them that they can get an advantage over their fellow printers by trading on paper makers' losses?

15,000 printers use a lot of paper. Are we as inefficient as that? The point is brought up for consideration by those executives who believe in their industry and are striving for the "better way".

A Poor Way to Do Business

In the belief of the writer, this is an extremely poor way to do business both on the part of the distributor and the paper mills concerned, and the thought occurs as to what the outlook of the United Typothetae itself as an organization is, with regard to it. Probably no other organization in the country has done more to build up in its industry a "cost consciousness" among its members. No other organization has striven harder or done better work in urging upon its members, the fact that they should work on a sound cost basis. Only recently they have published very complete data on ratios of operating expenses to sales, and it is very interesting to note, considering the advertisements under discussion, that Paper Costs amount to only 20.65 per cent (composite) of the total Sales Prices. In other words, for every $100.00 worth of sales, $20.65 represents cost of paper used.

Printing and Paper Closely Allied

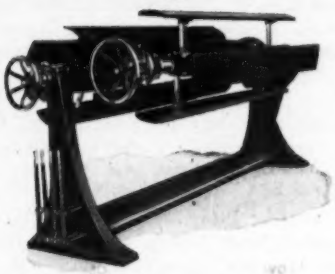
Now "what is good for the goose is good for the gander." Would the U.T.A. approve of page advertisements which appealed to the public to have their printng done with a concern advertising viz: The Cut Rate Printing Company, because this company having purchased the assets of large bankrupt printing company, could afford to work at a price about one-third less than the average printer? We know the U.T.A. could not afford to publish such an advertisement. It would be quite contrary to its high business ideals and foreign to fair business. Now the printing and paper industry are very closely allied. Many problems vitally affect both. Each is interested in promoting its respective soul. The U. T. A. believes, in promoting better printing. Can this be done on inferior paper? Paper is part of the printing, part of the picture. Good printing requires good paper. Putting good printing on poor paper is like putting old wine into new bottles to take another biblical allegory. By their own ratios it has been shown that paper only amounts to a little over 20 per cent of the total sales value, so that actual saving is only from 6 per cent to 10 per cent if the figures given in advertisement are correct. To make a saving of this amount and ruin the job, is not however, a gain, it's a loss if the job is unsatisfactory as it is likely to be. Since there are 14:999 other printers who can also use this "mill job paper", it is possible that the "devil of competition" won't be worsted. Others quoting may also take into consideration the fact, that the price may be lowered by cheapening the product, and the printer simply sells his soul for a mess of pottage as does the paper maker who sells his paper below cost.

Proper Cost Methods

As Secretary of the Cost Association, however, the writer is primarily interested in the fact, that undoubtedly there is a tremendous loss yearly in our industry, through manufacturing inefficiency, mainly caused by lack of control. So much has been written and said about cost systems, that every manufacturer must believe in the use of proper cost methods.

What are proper cost methods and how will their use enable executives to avoid these expensive errors?

H-S MACHINE CO.



IMPROVED AUTOMATIC COLLAPSING REEL

One of several designs used by Paper Manufacturers and converters. We design and manufacture Toilet Winders, Napkin Folders, Crepe Machines, Package Presses and other equipment for the Paper Converter and manufacturer. Write for catalogue.

Hudson-Sharp Machine Co.

GREEN BAY, WISCONSIN
Chicago Office: 574 Wrigley Bldg.
Manufacturers and Designers of Special Machinery

Better Quality
Lower Costs

What paper maker wouldn't listen to this combination? The answer is found in Quartz Quality Silicate. It cuts rosin and starch costs. But another big reason why you should look into the Quartz Quality size—it turns out a flat sheet that has increased strength, and better finish.

Dozens of mills now use this 2 in 1 paper size. When may we talk over its use in your mill?

PQ

Philadelphia Quartz Company
General Offices: Philadelphia
Chicago Office:
205 W. Wacker Drive
Established in 1831

"SUPERIOR" ROSIN SIZE

In Tank Cars or Drums

SUPERIOR CHEMICAL TRADE MARK

Quality Still Pays Dividends

The purchase of a really good cigar by one who enjoys his smokes is money well spent. So it is with everything else, whether it be a pair of shoes, a ton of coal or a tank car of "SUPERIOR ROSIN SIZE."

The makers of SUPERIOR ROSIN SIZE are ever on guard to investigate and improve the quality and distribution of this product, in order that the paper mills in the United States, Canada, Great Britain and Continental Europe may be afforded the highest quality Size delivered to them as economically and uniformly as possible.

SUPERIOR ROSIN SIZE is truly the most used sizing agent today (here and abroad). It is constantly winning new friends and keeping them.

Paper Makers Chemical Corporation

Easton, Pa.
Pensacola, Fla.
No. Milwaukee, Wis.
Carthage, N. Y.
Comstock, Mich.
Holyoke, Mass.
Jacksonville, Fla.
Stoneham, Mass.
Lockport, N. Y.
Atlanta, Ga.
Kalamazoo, Mich.
Savannah, Ga.
Albany, N. Y.
Boston, Mass.
Marrero, La.

AND ASSOCIATES

C. K. Williams & Co. ..... Easton, Pa., Emeryville, Cal., Malaga, Spain.
Geo. S. Mepham & Company ..... East St. Louis, Ill.
Pochins & Paper Makers Chemicals, Ltd. ..... Erith, Kent, Eng.
Paper Makers Importing Co. ..... Easton, Pa., St. Austell, Eng.
Vera Chemical Co. of Canada, Ltd. ..... Freeman, Ont.

"There is a Superior Plant near you"

SUPERIOR PRODUCTS

Rosin Size
Wax and Special Waterproofings
Satin White
English and Domestic Clays
Casein
Casein Solvents
Foam Killers
Felt Soaps
Soap Powder
Vegetable Tallow
Anti-Froth Oil
Softeners
Dry and Pulp Colors

Firstly, a proper cost system will account for all costs and expenses. That's the first step toward proper control. It tells where the money's going and points out to the operating staff where savings may be effected. Secondly, a cost system can be set up on a Standard Basis. That is every cost and expense will be carefully studied throughout the mill and standards of operation set up based on what may be called a reasonable operating efficiency. These costs are then used throughout the mill for all papers made. The actual costs are also assembled and then compared with the standard costs originally set up. It's these comparisons that tell the story and show where and how money is being wasted and what is directly to the point in this present article, will assist executives materially in correcting operating inefficiencies.

Since the technical and operating men assist in compiling standards, they are vitally interested in this system. Before being set-up, it requires that a thorough survey be made of the whole mill and the manufacturing possibilities. Thus a mill operating on this plan, with full knowledge of what its costs should be, has a much better control over its operations than it otherwise would have, and this control constantly improves as inefficiencies are disclosed, as a result of the periodical comparisons between the standard and the actual costs.

A mill operating on this plan will certainly ascertain why (as the advertisement previously referred to says) its papers are over or under weight or off size, or off color. The losses it is making as a result of these errors will be quickly disclosed and action taken to avoid them in future.

Those mills, particularly book mills, which want to know more about this system, should send representatives to the Cost Convention, which will be held at the Statler Hotel, Cleveland, Ohio, on October 25 and 26. "Standard Costs in a Book Paper Mill" will be the subject of an address by the Cost Accountant in a large Middle-Western Book Paper Mill. We don't want to give the tail of the devil of competition a twist by taking advantage of mistakes made by those from whom we make our large purchases, but to effect appreciable savings by the elimination of inefficient methods.

By this method not only may we make possible the making of reasonable profits, but also reduce the possibility of having it advertised extensively to our ultimate consumers, that they can save money by taking advantage of our mistakes.

In conclusion, may the thought be expressed, that fair dealing requires the use of standard merchandise, that printers can "save their souls" by using standard papers and by not relying on job lots to make their profits, also that paper-makers can do likewise by using every available means to reduce their output of poor quality papers and thus remove from the distributors the temptation to make exaggerated claims as to the savings that can be made by their use.

A. P. W. Paper Co. Meets

ALBANY, N. Y., October 9, 1928.—The annual meeting of stockholders of the A. P. W. Paper Company was held Monday at the offices of the firm in North Albany at which directors were elected for the coming year. Nine directors were chosen as follows: William A. Wheeler, Seth Wheeler, Jr., John J. Jansen, Thomas B. Wheeler, William L. Gillespie, Vernon D. Bierman, Spencer C. Dunn, Archibald D. Wheeler, and Robert E. Whalen.

Following the election a number of matters of interest were taken up and discussed and a report made on the progress of the building program. The directors inspected the work now under way on the new manufacturing unit which when commissioned will increase the plant capacity nearly 100 per cent. The construction work is rapidly nearing completion and it is understood that officials of the company are gratified at the progress being made.

Installation of the new paper machine will begin just as soon as the contractors finish their work on the main building. The new paper making unit will be in operation by the first of the year unless something unforeseen occurs.

Program for Cost Convention

The following is the program of cost convention to be held at the Statler Hotel, Cleveland, Ohio, on October 25 and 26:

"Operating Control Through Efficient Cost Methods," by James A. Reilly, Manager, Cost & Inventory Department, American Writing Paper Co., Holyoke, Mass.

"Standard Costs in a Book Mill," by Breck Aspinwall, Cost Accountant, Oxford-Miami Paper Company, West Carrollton, Ohio.

"Statistics as Applied to the Paper Industry," by Stanley Byron, Statistician of the Hammermill Paper Company.

"Shrinkage?" by C. M. Baker, Engineer, American Paper & Pulp Association.

"Fixed Assets and the Plant Ledger," by A. W. Astley, Cost Accountant, Chemical Paper Manufacturing Co., Holyoke, Mass.

"How to Handle Losses Covered by Insurance Policies," by Reed B. Timmers, Insurance Adviser, Albany, N. Y.

"Some Dennison Institutions Affecting Labor Turnover," by M. F. Carpenter, Assistant Employment Manager, Dennison Manufacturing Co., Framingham, Mass.

"Renewals, Replacements and Repairs," by H. G. Baldwin, The American Company, Milwaukee, Wis.

Business Session: Election of Officers, Consideration of Cost Association Plan, Appointment of Committees, and Annual Report of Secretary-Treasurer.

The program outlined above, covers subjects of considerable value to our members. Additional speakers are expected on "Safety Work" and "Balance Sheets and their Preparation."

All mills are invited to send representatives to this Convention, and are urged to make their reservations at the Statler Hotel, Cleveland, Ohio, at as early a date as possible. Convention will start at 9 A. M. on Thursday October 25th.

Boston Paper Trade Happenings

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., October 8, 1928.—The Arnold-Roberts Company has become exclusive agent in New England for Old Spanish Cover, a new line made by A. M. Collins. This cover, which has a leathery appearance, is made in blue brown, copper and red, in standard and medium weights, and in two sizes, 20x26 and 23x35. It is regarded as the greatest achievement in cover artistry perfected by Collins and the nearest approach in appearance to a fine leather binding. The surface is durable and semi-waterproof, prints well, and retains its beauty indefinitely. The body pages which the sample covers enclose are of Collins Laidtone Book White, Basis 200 lb. (M).

L. B. Tewksbury, vice-president of Spaulding & Tewksbury, has gone for a few days' vacation at the South Shore.

It is expected that the Benton Falls (Me.) mill of the United Paper Board Company, whose Boston office is at 683 Atlantic avenue, will be in full operation in about ten days so that shipments can be made.

Charles H. Wood, president of E. Butterworth & Co., Inc., has gone to Poland Springs, Me., for a two weeks' vacation.

John Adams, manager of the Casco Paper Box Company, Portland, Me., L. H. Hewlett, sales manager of the Chemical Paper Manufacturing Company, Holyoke, Mass., and Walter T. Holmes, of the same firm, were in the market last week.

W. R. Ingersoll, sales manager of the Dill & Collins Company, Philadelphia, called on the local distributors for that firm last week.

John S. Van Bael, formerly of the Walker Lithograph and Publishing Company, this city, has taken a position as salesman for Percy D. Wells.

Downingtown Mill Resumes Operations

DOWNINGTOWN, Pa., October 8, 1928.—The Downingtown Paper Company has resumed operations in full after a shut-down of one of their machines while a new roof was being built on the unit containing that machine.

SOME PAPER MILL USERS OF

Badenhausen Boilers

Superheaters :: Preheaters

Geo. F. Hardy, Consulting Engineer, New York
For Southern Paper Co., two orders, total 4700 H.P.
For St. Croix Paper Co. ..... 1200 H.P.
For Brown Paper Mill Co. ..... 3430 H.P.
Central Paper Co., Muskegon, Mich., four orders, total ..... 3100 H.P.
Philadelphia Paper Mfg. Co., Phila., three orders, total ..... 2400 H.P.
Jessup & Moore Paper Co., Phila., four orders, total ..... 4750 H.P.
Ontario Paper Co., Ltd.
For Daily Newspaper Co., North Tonawanda, N. Y. ..... 2034 H.P.
Filer Fibre Company, Filer City, Mich. ..... 1500 H.P.
John Lang Paper Co., Philadelphia, Pa..... 416 H.P.
Bayless Manufacturing Corp., Austin, Pa..... 1300 H.P.
Northern Board & Paper Co., San Francisco, Cal., two orders, total ..... 400 H.P.
Crown Willamette Paper Co., San Francisco, Cal., two orders, total ..... 750 H.P.
Delaware Hard Fibre Co., Wilmington, Del., two orders, total ..... 920 H.P.
Kieckhefer Container Co., Delair, N. J. ..... 1800 H.P.

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Reg. U. S. Pat. Off.
GENERAL OFFICE, 1011 CHESTNUT ST.
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1019 Guardian Life Bldg., St. Paul

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MONTREAL, CANADA

SULPHITE PULP
(Bleached, Easy Bleaching, Strong)

MECHANICAL PULP

KRAFT PULP

KRAFT PAPER

BUILDING PAPER

Cable Address "Acerbity" Montreal

CODES
Western Union (5 letter)
A.B.C. (5th Edition)

West Virginia Pulp and Paper Company

Manufacturers of

SUPERCALENDERED
and
MACHINE FINISHED BOOK
and LITHOGRAPHIC
PAPERS

Offset, Envelope, Bond, Writing, Cover and Music Paper, High Grade Coated Book, Index Bristol, Post Card, Kraft and Label Papers.

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Bleached Spruce Sulphite and Soda, Kraft Pulp

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122 East 7th St., Los Angeles, Cal.
Sixth and Chestnut Sts., Philadelphia, Pa.

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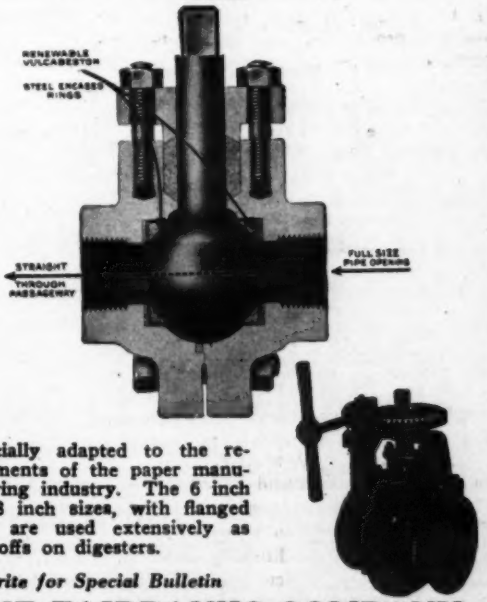


Especially adapted to the requirements of the paper manufacturing industry. The 6 inch and 8 inch sizes, with flanged ends, are used extensively as blow-offs on digesters.

Write for Special Bulletin

THE FAIRBANKS COMPANY

BOSTON NEW YORK PITTSBURGH

Factory: Binghamton, N. Y.

Distribution in ALL Principal Cities

Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING OCTOBER 6, 1928

SUMMARY

Cigarette paper	430 cs.
Wall paper	17 bls., 11 cs.
Paper hangings	38 bls., 4 cs.
Hanging paper	3 cs.
News print	9 bls., 1,232 rolls
Printing paper	84 cs., 103 rolls
Wrapping paper	57 bls., 48 cs.
Packing paper	57 cs.
Decalcomania paper	47 cs.
Aluminum paper	10 cs.
Colored paper	74 cs.
Gold coated paper	6 cs.
Surface coated paper	145 cs.
Baryta coated paper	111 cs.
Basic paper	5 cs.
Mousseline paper	8 cs.
Sulphate paper	426 rolls
Litho paper	50 cs.
Stencil paper and ink	42 cs.
Writing paper	18 cs.
Crepe paper	16 cs.
Tissue paper	54 cs.
Drawing paper	78 cs.
Filter paper	37 bls., 21 cs.
Parchment paper	26 bls.
Silk paper	49 cs.
Pith paper	1 cs.
Japanese paper	4 cs.
Metal foiled paper	4 cs.
Straw boards	412 rolls
Miscellaneous paper	482 rolls, 65 bls., 402 cs.

CIGARETTE PAPER

De Manduit Paper Corp., Schodack, Havre, 318 cs.
Standard Products Corp., Suffren, Havre, 80 cs.
P. J. Schweitzer, Pr. Harrison, Marseilles, 32 cs.

WALL PAPER

Schmidt & Pritchard, Hamburg, Hamburg, 1 ble.
Globe Shipping Co., Hamburg, Hamburg, 5 bls.
J. E. Bernard & Co., Hamburg, Hamburg, 4 cs., 1 bls.
F. J. Emmerich, Hamburg, Hamburg, 6 bls.
F. J. Emmerich, Celtic, Liverpool, 2 cs.
Thomas & Pierson, Majestic, Southampton, 2 cs.
A. C. Dodman, Jr., Inc., Majestic, Southampton, 4 bls.
J. E. Bernard & Co., Majestic, Southampton, 1 cs.

PAPER HANGINGS

W. H. S. Lloyd & Co., Carinthia, Liverpool, 31 bls.
W. H. S. Lloyd & Co., Minnewaska, London, 7 bls., 2 cs.
Whiting & Patterson Co., Inc., Majestic, Southampton, 2 cs.

HANGING PAPER

A. L. Diament & Co., France, Havre, 2 cs.
W. J. Byrnes & Co., Suffren, Havre, 1 cs.

NEWS PRINT

Perkins, Goodwin & Co., Karleruhe, Bremen, 514 rolls.
Parsons & Whittemore, Inc., Karleruhe, Bremen, 389 rolls.
Parsons & Whittemore, Inc., Columbus, Bremen, 123 rolls.
O. Ray, Gripsholm, Gothenburg, 114 rolls, 9 bls.
Hudson Trading Co., Bergensfjord, Follum, 80 rolls.
Guaranty Trust Co., Bergensfjord, Follum, 12 rolls.

PRINTING PAPER

Coles & Co., Singapore Maru, Hamburg, 1 cs.
Keuffel & Esser Co., Hamburg, Hamburg, 103 rolls.
P. C. Zuhlke, Pennland, Antwerp, 55 cs.
Judson Freight F'd'g Co., Pennland, Antwerp, 17 cs.
Oxford University Press, Carinthia, Liverpool, 2 cs.
Titan Shipping Co., Minnewaska, London, 5 cs.
Japan Paper Co., Berengaria, Southampton, 4 cs.

WRAPPING PAPER

C. Steiner, Hamburg, Hamburg, 40 cs.
Birn & Wachenheim, Hamburg, Hamburg, 5 bls.
Birn & Wachenheim, Pennland, Antwerp, 32 bls.
Blauvelt Wiley Paper Manfg. Co., Gripsholm, Gothenburg, 20 bls.
S. Gilbert, Pr. Roosevelt, Bremen, 8 cs.

PACKING PAPER

Universal Carloading Co., Karleruhe, Bremen, 14 cs.
Haule Wax Paper Manfg. Co., Hamburg, Hamburg, 30 cs.
International F'd'g Co., Hamburg, Hamburg, 8 cs.
Hensel B. & Lorbacher, Rotterdam, Rotterdam, 5 cs.

DECALCOMANIA PAPER

C. W. Sellers, Columbus, Bremen, 6 cs.
C. W. Sellers, Pr. Roosevelt, Bremen, 14 cs.
B. F. Drakenfeld & Co., Carinthia, Liverpool, 27 cs. (duplex).

ALUMINUM PAPER

Catty Foil Co., Columbus, Bremen, 10 cs.

COLORED PAPER

S. Gilbert, Columbus, Bremen, 19 cs.
J. Beckhard & Co., Columbus, Bremen, 2 cs.
E. Dietzgen & Co., Hamburg, Hamburg, 53 cs.

GOLD COATED PAPER

F. Murray Hill, Columbus, Bremen, 6 cs.

SURFACE COATED PAPER

Quality Art Novelty Co., Hamburg, Hamburg, 1 cs.
Whiting & Patterson Co., Inc., Hamburg, Hamburg, 10 cs.
P. C. Zuhlke, Pennland, Antwerp, 27 cs.
Gevaert Co. of America, Pennland, Antwerp, 107 cs.

BARYTA COATED PAPER

J. H. Schroeder Banking Corp., Pr. Roosevelt, Bremen, 25 cs.
Globe Shipping Co., Pr. Roosevelt, Bremen, 86 cs.

BASIC PAPER

Globe Shipping Co., Pr. Roosevelt, Bremen, 5 cs.

MOUSSELINE PAPER

P. J. Schweitzer, Pr. Harrison, Marseilles, 8 cs.

SULPHATE PAPER

Insight Paper Co., Bergensfjord, Oslo, 426 rolls.

LITHO PAPER

Fuchs & Lang Manfg. Co., Hamburg Maru, Canton, 50 cs.

STENCIL PAPER AND INK

Arlac Dry Stencil Co., Hamburg, Hamburg, 42 cs.

WRITING PAPER

American Express Co., Karlsruhe, Bremen, 6 cs.
J. E. Bernard & Co., Schodack, Havre, 1 cs.
T. D. Downing & Co., Schodack, Havre, 2 cs.
J. E. Bernard & Co., Majestic, Southampton, 2 cs.
L. Bamberger & Co., MacKeesport, Havre, 3 cs.
American Express Co., MacKeesport, Havre, 1 cs.
B. Altman & Co., Berengaria, Southampton, 1 cs.
J. E. Bernard & Co., Berengaria, Southampton, 2 cs.

CREPE PAPER

F. Henjes, Jr., Karlsruhe, Bremen, 16 cs.

TISSUE PAPER

Old Master Paper & Pulp Corp., Hamburg, Hamburg, 51 cs.
Dubilier Condenser & Radio Corp., Carinthia, Liverpool, 3 cs.

DRAWING PAPER

Keuffel & Esser Co., Hamburg, Hamburg, 73 cs.
H. Reeve Angel & Co., Inc., Tuscania, London, 5 cs.

FILTER PAPER

G. W. Sheldon & Co., Schodack, Havre, 10 cs.
H. Reeve Angel & Co., Inc., Tuscania, London, 11 cs.
A. Giese & Son, Majestic, Southampton, 37 bls.

PARCHMENT PAPER

Walker, Goulard, Plehn Co., Hamburg, Hamburg, 26 bls.

SILK PAPER

Whiting & Patterson Co., Inc., Rotterdam, Rotterdam, 13 cs.
Meadows, Wye & Co., Rotterdam, Rotterdam, 36 cs.

PITH PAPER

Nowasa & Co., Tatsuno Maru, Keelung, 1 cs.

JAPANESE PAPER

Y. Yabuki & Co., Tatsuno Maru, Kobe, 4 cs.

METAL FOILED PAPER

Yokohama Specie Bank, Tatsuno, Yokohama, 4 cs.

STRAW BOARD

Haas Bros., Beemsterdyk, Rotterdam, 100 rolls.
C. H. Powell & Co., Innoko, Rotterdam, 164 rolls.
A. Vuyk, Rotterdam, Rotterdam, 148 rolls.

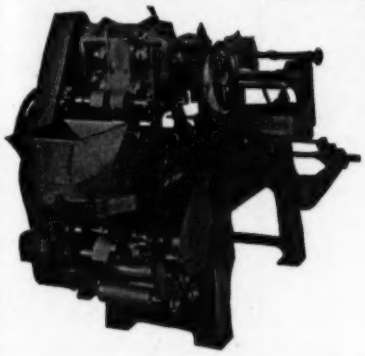
MISCELLANEOUS PAPER

Japan Paper Co., Gripsholm, Gothenburg, 4 cs.
W. J. Byrnes & Co., Suffren, Havre, 45 cs.
Kolesch & Co., Innoko, Rotterdam, 5 cs.
Standard Products Corp., France, Havre, 73 cs.
Keller, Dorian Paper Co., France, Havre, 14 cs.
Japan Paper Co., France, Havre, 8 cs.
B. Altman & Co., France, Havre, 6 cs.
Wilkinson Bros. & Co., Inc., Innaren, Gothenburg, 90 cs., 482 rolls.
H. Reeve Angel & Co., Inc., Innaren, Gothenburg, 65 bls.
American Express Co., Pr. Roosevelt, Bremen, 72 cs.
Steiner Paper Corp., Rotterdam, Rotterdam, 15 cs.
E. Dietzgen & Co., Rotterdam, Rotterdam, 29 cs.
W. Van Doorn, Rotterdam, Rotterdam, 16 cs.
Globe Shipping Co., Rotterdam, Rotterdam, 25 cs.

RAGS, BAGGINGS, ETC.

Robert Blank, Coeur d'Alene, Leghorn, 92 bls. rags.
Guaranty Trust Co., Coeur d'Alene, Leghorn, 69 bls. rags.
C. B. Richard & Co., Karlsruhe, Bremen, 333 bls. rags.
Castle & Overton, Inc., Hellig Olaf, Copenhagen, 74 bls. rags; 58 bls. bagging.
A. H. Searle, Inc., Transylvania, Glasgow, 58 bls. paper stock.
Jaffe Products Co., Sud Pacifico, Havana, 41 bls. new cuttings.
Castle & Overton, Inc., Singapore Maru, Hamburg, 120 bls. bagging.
E. Mayer, Inc., Singapore Maru, Hamburg, 89 bls. rags.
C. B. Richard & Co., Singapore Maru, Hamburg, 219 bls. rags.
Brown Bros. & Co., Hamburg, Hamburg, 20 bls. rags.
E. J. Keller Co., Inc., Hamburg, ——, 21 bls. linen threads; 3 bls. rags.
Chase National Bank, Hamburg, Hamburg, 139 bls. flax waste.
American Exchange Irving Trust Co., Hamburg, Hamburg, 92 bls. cotton waste.
Amtorg Trading Co., Hamburg, Hamburg, 39 bls. rags.
Castle & Overton, Inc., Hamburg, Hamburg, 9 bls. rags; 42 bls. thread waste.
A. W. Fenton, Inc., Hamburg, Hamburg, 55 bls. rags.
W. Schall & Co., Hamburg, Hamburg, 31 bls. jute waste.
American Over-Ocean Corp., Tatsuno Maru, Kobe, 25 bls. rags.
Darmstadt, Scott & Courtney, Anjer, Barcelona, 267 bls. bagging.
S. Birkenstein & Son, Anjer, Barcelona, 108 bls. rags.
Castle & Overton, Inc., Carinthia, Liverpool, 58 bls. bagging.
C. R. Spence, Carinthia, Liverpool, 76 bls. rags.
Gallagher & Ascher, Minnewaska, London, 70 bls. rags.
W. Steck & Co., Schodack, Havre, 215 bls. jute waste.
Banco Comm'l Italiane Trust Co., Schodack, Havre, 44 bls. rags.
Darmstadt, Scott & Courtney, Schodack, Havre, 60 bls. rags.
V. Galaup, Schodack, Havre, 44 bls. bagging.
Overton & Co., Schodack, Havre, 113 bls. bagging.
Castle & Overton, Inc., Schodack, Havre, 51 bls. bagging; 151 bls. rags.
E. J. Keller Co., Inc., Schodack, ——, 45 bls. rags.
Star Woolen Co., Ala, Antwerp, 30 bls. rags.
A. W. Fenton, Inc., Ala, Antwerp, 46 bls. rags.
Castle & Overton, Inc., MacKeesport, Havre, 17 bls. bagging.
V. Galaup, MacKeesport, Havre, 89 bls. bagging; 102 bls. rags.
American Rag Trading Co., MacKeesport, Havre, 59 bls. bagging.
American Woolen Co., MacKeesport, Havre, 11 bls. rags.
Star Woolen Co., MacKeesport, Havre, 66 bls. rags.
A. W. Fenton, Inc., Pr. Roosevelt, Bremen, 39 bls. rags.
W. Schall & Co., Rotterdam, Rotterdam, 156 bls. bagging.
C. B. Richard & Co., Lucia C., Trieste, 87 bls. rags.
Guaranty Trust Co., Lucia C., Bari, 49 bls. rags; 79 bls. bagging.
Bank of The Manhattan Co., Lucia C., Palermo, 138 bls. rags.
Castle & Overton, Inc., Bolivier, Antwerp, 140 bls. rags.
E. J. Keller Co., Inc., Bolivier, ——, 32 bls. rags.

(Continued on page 76)



HIGHEST SPEED
Paper Bag Machinery

Get My Quotations Before Placing Your Orders
Special Machinery Designed and Built

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ALPHA GRADES

of Purified Cellulose Fibre representing some of the valuable results of our many years of research in cellulose chemistry.

SUPER ALPHA

for strength in Tear, Fold and Mullen. Super Alpha equals the higher grades of rags in the manufacture of fine papers.

EASY-BEATING ALPHA

This is a grade developed for mills of limited beating capacity. While not giving results equal to Super Alpha, it produces wonderful paper on short beating.

REGULAR ALPHA

This is a grade midway between Super and Easy-Beating.

Use ALPHA for Quality

BROWN Company — FOUNDED 1852 — B.C. — Portland, Maine

The B.B. QUALITY PULPS

HAFSLUND NORWAY — **"HAFSLUND BEAR" Bleached Sulphite**

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KRAFT HURUM NORWAY SPECIAL KOOS BAC — **"HURUM SPECIAL" Extra Strong Kraft**

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Dietz Toilet Paper Machines

For making Toilet and Paper Towel Rolls
(With or without perforations)

Self Adjusting — Easy to Operate

Also

AUTOMATIC TUBE MACHINES

Manufacturers of Sanitary Crepe Towel Machines, Slitting and Rewinding Machines, Drop Roll Slitting Machines, Photo Mount Beveling Machines, Rotary Card Cutting Machines, etc.
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LEE, MASS.

Revolving Paper Cutters—Rag Cutters—Cylinder Paper Machines—Washing and Beating Engines—Chilled Iron and Paper Calenders—Fan and Stuff Pumps—Engine Roll Bars and Bed Plates—
Cylinder Molds—Marshall Drives—Slitters and Rewinders—Reels—Dryers with Improved Packing Boxes—Wet Machines—Gun Metal and Rubber Rolls—Rolls Reground.

Imports of Paper and Paper Stock

(*Continued from page 74*)

OLD ROPE

Brown Bros. & Co., Hamburg, Hamburg, 47 coils.
Guaranty Trust Co., Anjer, Leghorn, 33 coils.
American Exchange Irving Trust Co., Innoko, Rotterdam, 33 bales.

CASEIN

Karolith Corp., Suffren, Havre, 134 bags.
National Park Bank, Majestic, Southampton, 67 bags.
National City Bank, Vauban, B. Aires, 334 bags.
A. Klipstein & Co., MacKeesport, Havre, 317 bags, 25,000 kilos.

WOOD PULP

Polaris Shipping Co., Hillegom, Sonora, 916 cords wood pulp.
E. J. Keller Co., Inc., Hamburg, ——, 1,049 bls. wood pulp, 160 tons.
Castle & Overton, Inc., Hamburg, Hamburg, 741 bls. wood pulp, 111 tons.
J. Andersen & Co., Talisman, Greaker, 1,080 bls. sulphite.
The Borregaard Co., Inc., Talisman, Havre, 876 bls. sulphate.
M. Gottesman & Co., Inc., Talisman, Halmstad, 625 bls. sulphite.
Woodpulp Service Corp., Talisman, Halmstad, 125 bls. sulphite.
Johanson, Wales & Sparre, Inc., Talisman, Gothenburg, 299 bls. dry soda pulp.
J. Andersen & Co., Talisman, Gothenburg, 300 bls. sulphite.
E. M. Sergeant & Co., Talisman, Gothenburg, 175 bls. sulphite.
International Accep. Bank, Bergensfjord, Oslo, 800 bls. kraft pulp.
Atterbury Bros., Inc., Bergensfjord, Frederickstad, 1,000 bls. wood pulp.
Chemical National Bank, Norefjord, Tofte, 860 bls. sulphite, 107 tons.
Perkins, Goodwin & Co., Norefjord, Mjondalen, 250 bls. sulphite, 50 tons.
O. E. Kiaer, Norefjord, Greaker, 1,625 bls. sulphite, 328 tons.
J. Andersen & Co., Norefjord, Greaker, 2,660 bls. sulphite, 467 tons.
C. B. Richard & Co., Gerberviller, Port Hawkesbury, 800 cords wood pulp.
O. E. Kiaer, United States, Oslo, 400 bls. sulphite.
M. Gottesman & Co., Inc., Gonzenheim, Iggesund, 875 bls. sulphate, 175 tons.
Chemical National Bank, Gonzenheim, Iggesund, 759 bls. sulphite, 151 tons.
Bulkley, Dunton & Co., Gonzenheim, ——, 3,275 bls. wood pulp, 655 tons.
Pagel, Horton & Co., Inc., Atlantic, Geffe, 2,000 bls. sulphite.
Bulkley, Dunton & Co., Atlantic, ——, 7,782 bls. wood pulp, 1,466 tons.
Johanson, Wales & Sparre, Inc., Atlantic, Svartvik, 150 bls. sulphite, 25 tons.
Castle & Overton, Inc., Atlantic, Svartvik, 150 bls. sulphite, 25 tons.
Perkins, Goodwin & Co., Atlantic, Svartvik, 1,500 bls. sulphite, 250 tons.
M. Gottesman & Co., Inc., Atlantic, Soraker, 475 bls. sulphate, 95 tons.
Johanson, Wales & Sparre, Inc., Atlantic, Soraker, 1,300 bls. sulphate, 260 tons.
E. M. Sergeant & Co., Atlantic, Hernosand, 3,600 bls. sulphite, 600 tons.
J. Andersen & Co., Atlantic, Hernosand, 5,250 bls. sulphite, 875 tons; 2,100 bls. sulphate, 420 tons.
J. Andersen & Co., Atlantic, Stugsund, 125 bls. sulphite, 25 tons.
Scandinavian Pulp Agency, Inc., Innaren, Gothenburg, 2,794 bls. kraft pulp.
Equitable Trust Co., Innaren, Gothenburg, 250 bls. sulphite.
International Accep. Bank, Innaren, Gothenburg, 125 bls. sulphite.
Johanson, Wales & Sparre, Inc., Innaren, Gothenburg, 449 bls. dry soda pulp.
Price & Pierce, Ltd., Innaren, Gothenburg, 250 bls. wood pulp.
Parsons & Whittemore, Inc., Innaren, Gothenburg, 300 bls. sulphite.

WOOD PULP WADDING

Birn & Wachenheim, Rotterdam, Rotterdam, 50 bls.

WOOD FLOUR

The Burnet Co., Talisman, Rothenburg, 500 bags.
The Burnet Co., Innoko, Rotterdam, 1,000 bags, 50,000 kilos.
B. L. Soberski, Norefjord, Frederickstad, 2,550 bags, 173,400 kilos.
State Chemical Co., Rotterdam, Rotterdam, 400 bags.

BALTIMORE IMPORTS

WEEK ENDING OCTOBER 6, 1928

Kalbfleisch Corp., Schodack, Havre, 200 bags casein, 15,112 kilos.
Castle & Overton, Inc., Schodack, Havre, 211 bls. rags.
Congoleum Nairn Co., Schodack, Havre, 192 bls. bagging; 597 bls. rags.
Congoleum Nairn Co., Schodack, Dunkirk, 539 bls. rags; 145 bls. bagging.
Congoleum Nairn Co., Ala, Antwerp, 642 bls. rags; 66 bls. bagging.
W. H. Masson & Co., Ala, Antwerp, 108 bls. old rope.
Darmstadt, Scott & Courtney, Ala, Antwerp, 43 bls. rags.
Bulkley, Dunton & Co., Atlantic, ——, 875 bls. sulphite, 175 tons.
Johanson, Wales & Sparre, Inc., Atlantic, Sundsvall, 1,200 bls. sulphite, 200 tons.
E. M. Sergeant & Co., Atlantic, Hernosand, 6,450 bls. sulphite, 1,075 tons.
Scandinavian Pulp Agency, Inc., Atlantic, Hernosand, 300 bls. sulphite, 50 tons.
Willard Storage Battery Co., Atlantic, Hernosand, 90 bls. sulphite, 15 tons.
Pagel, Horton & Co., Inc., Atlantic, Hernosand, 750 bls. sulphite, 125 tons.
O. E. Kiaer, Tugela, Oslo, 1,600 bls. sulphite.
Castle & Overton, Inc., Westerdyk, Holland, 1,039 bls. wood pulp.
Castle & Overton, Inc., Zenada, Germany, 3,941 bls. wood pulp.

NORFOLK IMPORTS

WEEK ENDING OCTOBER 6, 1928

E. Butterworth & Co., Inc., Ala, Antwerp, 123 bls. bagging.
British American Tobacco Co., Ala, Antwerp, 25 cs. printed cigarette wrappers.
Castle & Overton, Inc., Zenada, Germany, 701 bls. wood pulp.

PHILADELPHIA IMPORTS

WEEK ENDING OCTOBER 6, 1928

Banco Com'l Italiane Trust Co., Coeur d'Alene, Legborn, 132 bls. rags.
Chase National Bank, Innoko, Rotterdam, 371 bls. rags.
Bulkley, Dunton & Co., Atlantic, ——, 1,000 bls. sulphate, 200 tons.
Price & Pierce, Ltd., Atlantic, Stugsund, 600 bls. sulphite, 100 tons.
Johanson, Wales & Sparre, Inc., Atlantic, Sundsvall, 3,025 bls. sulphite, 525 tons.
Parsons & Whittemore, Inc., Atlantic, Sundsvall, 125 bls. sulphite, 25 tons.
Scandinavian Pulp Agency, Inc., Atlantic, Sundsvall, 500 bls. sulphite, 100 tons; 1,250 bls. sulphate, 250 tons.
M. Gottesman & Co., Inc., Atlantic, Sundsvall, 500 bls. sulphite, 100 tons.
J. Andersen & Co., Atlantic, Hernosand, 1,350 bls. sulphite, 225 tons; 1,500 bls. sulphate, 300 tons.
J. W. Hampton & Co., MacKeesport, Havre, 2 cs. writing paper.
Stephano Bros., MacKeesport, Havre, 26 cs. cigarette paper.
Castle & Overton, Inc., MacKeesport, Havre, 37 bls. new cuttings; 547 bls. rags.
G. W. Millar & Co., MacKeesport, Havre, 14 bls. rags.
National Bank of Commerce, MacKeesport, Havre, 85 bls. rags.
Brown Bros. & Co., MacKeesport, Havre, 85 bls. jute waste.
G. Mathes & Co., MacKeesport, Havre, 50 bls. rags.
S. E. Ingber, MacKeesport, Havre, 83 bls. rags.
V. Galaup, MacKeesport, Havre, 404 bls. rags.
A. Hurst & Co., MacKeesport, Havre, 144 bls. rags.
Salomon Bros. & Co., MacKeesport, Dunkirk, 24 bls. rags.
Castle & Overton, Inc., MacKeesport, Dunkirk, 310 bls. rags.
G. W. Millar & Co., MacKeesport, Dunkirk, 53 bls. rags.
V. Galaup, MacKeesport, Dunkirk, 474 bls. rags.
Katzenstein & Keene, Inc., MacKeesport, Dunkirk, 237 bls. rags.
O. E. Kiaer, Tugela, Oslo, 600 bls. sulphite.
E. J. Keller Co., Inc., West Harcuvar, ——, 204 bls. rags.
Castle & Overton, Inc., Saco, Antwerp, 46 bls. rags.
Castle & Overton, Inc., Chicago City, England, 90 bls. rags.
Castle & Overton, Westerdyk, Holland, 1,260 bls. wood pulp.
Castle & Overton, Inc., Zenada, Germany, 501 bls. wood pulp; 4 cs. wire cloth.
Castle & Overton, Inc., Havelland, Denmark, 173 bls. rags.
Castle & Overton, Inc., Lehigh, England, 600 bls. rags.
Castle & Overton, Inc., Davisian, England, 98 bls. rags.
Castle & Overton, Inc., Arabic Maru, Japan, 570 bls. rags.

NEWPORT NEWS IMPORTS.

WEEK ENDING OCTOBER 6, 1928

M. Gottesman & Co., Inc., Gonzenheim, Iggesund, 3,125 bls. sulphite, 625 tons.
Castle & Overton, Inc., Westerdyk, Rotterdam, 602 bls. wood pulp.

NEW ORLEANS IMPORTS

WEEK ENDING OCTOBER 6, 1928

Castle & Overton, Inc., Cranford, France, 60 bls. rags.

PORTLAND IMPORTS

WEEK ENDING OCTOBER 6, 1928

Bulkley, Dunton & Co., C. H. Cramp, ——, 2,395 bls. wood pulp.
O. E. Kiaer, Copenhagen, Sikea, 4,500 bls. sulphite.

BOSTON IMPORTS

WEEK ENDING OCTOBER 6, 1928

A. H. Searle, Coeur d'Alene, Marseilles, 62 bls. rags.
R. Harris & Co., Mississippi, London, 2 cs. photo paper.
H. O. Houghton Co., Mississippi, London, 35 cs. printing paper.
Barine Bros. & Co., Mississippi, London, 190 bls. waste paper.
Fitchburg Paper Co., Mississippi, London, 87 bls. waste paper.
Green, Hamilton & Co., Innoko, Rotterdam, 77 bls. cotton waste.
G. M. Graves Co., Innoko, Rotterdam, 109 bls. rags.
G. W. Millar & Co., Innoko, Rotterdam, 167 bls. rags.
C. H. Powell & Co., Innoko, Rotterdam, 303 rolls straw board.
Bulkley, Dunton & Co., Copenhagen, ——, 3,250 bls. wood pulp.
Bulkley, Dunton & Co., Ulvo, ——, 1,000 bls. wood pulp.
O. E. Kiaer, Odensholm, Stockholm, 1,500 bls. sulphite.
O. A. Kiaer, Dania, Oslo, 2,360 bls. sulphite.
O. E. Kiaer, Tugela, Greaker, 250 bls. sulphite.
O. E. Kiaer, Hjelmaren, Gothenburg, 1,500 bls. sulphite.
Castle & Overton, Inc., Westerdyk, Rotterdam, 1,134 bls. wood pulp.

Mill and Merchants Conference at Holyoke

HOLYOKE, Mass., October 3, 1928.—The sixth annual mill and merchant conference of the Crocker-McElwain and Chemical Paper Manufacturing Companies was held at the Hotel Nonotuck the past week. The conference opened with an address by C. A. Crocker, president of both companies. Vice-President E. C. Tucker gave a detailed account of the specials made at both mills and E. S. Dunbar gave a talk on advertising. Walter E. Perry led the discussion on the merchandising of paper that followed.

Departmental meetings followed the first day with various outings for the men and the women attending. The annual banquet was held Monday night and Tuesday night those delegates who remained joined with the American Writing Paper Company in an informal dinner.

An authority said recently:

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New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, October 10, 1928.

Trading in the local paper market was well sustained during the past week and the various grades of paper were in better demand than for some time. Inquiries for future business are numerous and the closing months of the year promise to be unusually active. Sales forces of the leading paper houses are booking generous orders and are mostly optimistic over the outlook for the future.

Production of news print is being maintained at around 76 per cent of total capacity in North American mills and the output is being freely absorbed by the publishers. Demand during the next few months is expected to be very heavy. Spot prices are practically unchanged but generous concessions are being made on contract orders signed for the forthcoming year.

The undertone of the paper board market is strong. Consumption is well up to average for the season and prices rule steady to firm. Some improvement was noticed in the fine paper market. Tissues are in better request than of late. The coarse paper market is in a sound position while wrapping paper continues to move in good volume.

Mechanical Pulp

Interest in domestic and imported grades of ground wood is gradually growing although most of the business transacted during the past week was along routine lines. Contract shipments are going forward fairly regularly. Prices are generally holding to schedule and shading is infrequent.

Chemical Pulp

Steadiness prevails in the chemical pulp market. Imported and domestic bleached sulphite continues exceptionally strong and various other grades are also in excellent request. Shipments against contract are moving in satisfactory volume. No further price changes were recorded since last week and there is not much talk of concessions at present.

Old Rope and Bagging

Demand for imported and domestic old rope continues fairly brisk. Supplies are reported to be limited and prices rule steady, in most instances. The bagging market is exhibiting an improved tendency. Scrap bagging is moderately active, while gunny bagging is also in fair request. Prices are generally holding to former levels.

Rags

Mill interest in the domestic rag market appears to be improving. Demand for the various grades is broadening, due to heavier production of paper. The tone of the foreign rag market is quiet and quotations abroad are still considered high. Prices of both domestic and imported rags are practically unaltered.

Waste Paper

The lower grades of paper stock are still in heavy request from the board mills. Strictly folded news and old kraft machine compressed bales continue in excellent demand. Book stock is showing signs of improvement. Soft white shavings are firmer than for some time past. The recent advance in container manilas is being maintained.

Twine

Now that the holiday season is approaching, business in the local twine market is beginning to expand. With the demand for wrapping paper growing steadily the improvement in the twine industry may be expected to continue for three or four months, at least. Prices are holding to schedule without difficulty and reports of concessions are infrequent.

Taggart Corp. Offers Stock

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., October 9, 1928.—A public offering of 70,000 shares of stock in the Taggart Corporation has been over-subscribed, according to announcement made this week by F. L. Carlisle & Co. through whom the stock was offered for sale. The Taggart Corporation was launched recently by the Carlisle interests to bring under single ownership and management the Taggart group of paper companies in Northern New York. The public offering of stock included 20,000 shares of $7 cumulative preferred stock and 50,000 shares of common stock of no par value. The preferred stock was offered at $102.50 a share and accrued dividend and the common stock at $32.50.

The capitalization of the Taggart Corporation consists of 100,000 shares of cumulative preferred stock of which 30,000 shares carrying a $7 dividend are outstanding; 100,000 shares of Class A stock without par value, entitled to a $2 cumulative dividend of which 30,000 shares are outstanding and 1,000,000 shares of no par value common of which 515,000 shares are outstanding and 30,000 reserved for exercise of common stock subscription warrants.

The Taggart Corporation owns all the capital stocks of Taggart Brothers, Inc., of Watertown and Herring, the Taggart Oswego Paper and Bag Corporation, Oswego, and the Champion Paper Corporation, of Carthage, the latter firm owning all the capital stock of the Carthage Power Corporation.

The Taggart plants have an annual capacity of more than 50,000 tons of kraft and manila rope paper which is converted into multi-wall and other types of heavy bags. The total bag making capacity of the plants, upon completion of the new factory at Carthage and the addition to the Oswego mill will amount to more than 200,000,000 bags annually.

Commercial Attache To Europe With Paper Men

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., October 10, 1928.—M. H. Lund, recently appointed commercial attache to Oslo, Norway, is now in Washington getting acquainted with the methods of the Department of Commerce.

He will leave here the latter part of this week, to confer for the next three weeks or so with paper and other manufacturers in various parts of the United States prior to sailing for Europe. It is expected that Mr. Lund will sail on November 28, but before going to Oslo will visit several other countries. Mr. Lund has been in the paper business for many years and it is expected that his reports from Oslo will be of great benefit to the trade.

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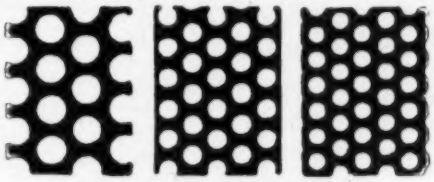

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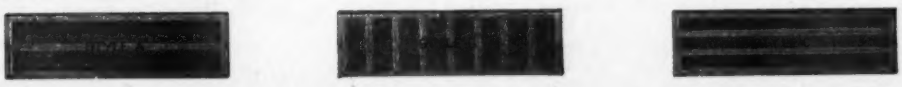

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Sole Manufacturers of the Union-Witham Screen Plate Vat and Fastener

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, October 10, 1928.

BLANCE FIXE.—No radical changes have transpired in the blanc fixe market of late. Demand for both the pulp and the powder is normal. Prices are steady. The pulp is selling at from $42.50 to $45.00 per ton, in bulk, while the powder is quoted at from 3½ cents to 3⅝ cents a pound, in barrels, at works.

BLEACHING POWDER.—Contract withdrawals of bleaching powder are moving in fair volume. Demand for this product is rather light at present. Prices are generally holding to former levels, and shading is infrequent. Bleaching powder is quoted at from $2.00 to $2.35 per 100 pounds, in large drums, at works.

CASEIN.—Most of the business transacted in the casein market during the week was along routine lines. Prices remain unaltered. Domestic casein is still offered at from 15¾ cents to 17¼ cents per pound, while inported casein is selling at around 17 cents per pound, all in bags, car load quantities.

CAUSTIC SODA.—Steadiness prevails in the caustic soda market Shipments against contract are proceeding at a satisfactory pace. Prices are unchanged. Solid caustic soda is quoted at from $2.90 to $2.95 per 100 pounds. The flake and the ground are selling at from $3.30 to $3.35 per 100 pounds.

CHINA CLAY.—Some improvement was noted in the china clay market. Contract shipments have been going forward in heavy volume. Imported china clay is quoted at from $15 to $25 a ton, ship side. Domestic paper making clay is selling at from $8 to $9 and pulverized at from $10 to $12 a ton.

CHLORINE.—Demand for chlorine is persistent and a good volume of inquiries are being received for future business. Prices remain unchanged. Chlorine is quoted at 3½ cents a pound, in tanks, or multiunit cars, at works, on contract orders. The spot quotation ranges from 3¾ to 4 cents a pound.

ROSIN.—The rosin market is practically unchanged. At the naval stores, the grades of gum rosin used in the paper mills are now selling at from $9.35 to $9.50 per 280 pounds, ex dock, in barrels. Wood rosin is still offered at from $7.25 to 8.05 per 280 pounds, in barrels, at southern shipping points.

SALT CAKE.—Conditions in the salt cake market are satisfactory. Demand for this productor is persistent. Offerings are limited and there are no undue accumulations. Prices remain steady and unchanged. Salt cake is quoted at from $15 to $17 a ton, in bulk, at works.

SODA ASH.—The undertone of the soda ash market is strong. Supplies are moving into consumption in a satisfactory manner, Prices are holding to former levels, in most instances. Contract quotations on soda ash, in car lots, per 100 pounds, according to grade, are as follows: in bags, $1.32½, and in barrels, $1.55.

STARCH.—Business in the starch market was fairly active. Contract withdrawals continue to move at a steady pace. Prices are generally holding to schedule and there is little talk of concessions. Special paper making starch is quoted at $4.07 per 100 pounds, in bags, and at $4.24 per 100 pounds, in barrels.

SULPHATE OF ALUMINA.—Production of sulphate of alumina is being maintained in sufficient volume to take care of current requirements. Commercial grades of sulphate of alumina are quoted at from $1.40 to $1.55 per 100 pounds. The iron free is selling at from $1.90 to $2.05 per 100 pounds.

SULPHUR.—The sulphur market is in a sound position. Supplies are moving into consumption in heavy volume. Inquiries for future business are numerous. Prices remain steady and unchanged. Sulphur is quoted at from $18 to $19 a ton, in bulk, at mines. The spot quotation is $20 per ton.

TALC.—Consumption of talc is well up to average. Shipments against contract are being maintained in normal volume. Prices are generally holding to schedule. Domestic talc is offered at from $16 to $18 a ton, in bulk, at eastern mines. Imported talc is selling at from $18 to $20 per ton, ship side.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub sized	10.00	@15.00
Engine sized	8.00	@11.00
News—		
Rolls, contract	3.25	@ —
Rolls, transient	3.25	@ 3.50
Sheets	3.65	@ 3.85
Side Runs	3.00	@ 3.75
Book, Cased—		
S. & S. C.	6.35	@ 7.75
M. F.	6.25	@ 7.75
Coated and Enamel	8.00	@15.00
Lithograph	8.00	@15.00
Tissues—Per Ream—		
White No. 1	.75	@ 1.00
Anti-Tarnish	1.10	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.75	@ .85
Kraft	.90	@ 1.00
Manila	.75	@ .85
Kraft—		
No. 1 Domestic	6.25	@ 6.50
No. 2 Domestic	4.25	@ 4.50
Southern	4.00	@ 4.25
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
Screenings	3.00	@ 3.25
Card Middles	4.00	@ 5.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

(Delivered New York)

Boards—per ton—		
News	42.50	@45.00
Straw	52.50	@55.00
Chip	40.00	@42.50
Binders' Boards	65.00	@67 50
Sgl. Mla. Ll. Chip.	50.00	@52.50
Wood Pulp	80.00	@85.00
Container	57.50	@60.00
85 Test Jute Liner.	55.00	@57.50

Mechanical Pulp

(Ex-Dock)

No. 1 Imported—		
Moist	28.00	@31.25
Dry	32.00	@34.00

(F. o. b. Mill)

No. 1 Domestic	26.00	@29.00
Screenings	15.00	@20.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.65	@ 4.40
Easy Bleaching	2.80	@ 2.90
No. 1 strong unbleached	2.50	@ 2.70
Mitscherfich unbleached	2.65	@ 3.25
No. 2 strong unbleached	2.40	@ 2.60
No. 1 Kraft	2.50	@ 2.75
No. 2 Kraft	2.40	@ 2.50
Sulphate—		
Bleached	3.75	@ 3.85

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.40	@ 4.75
Easy Bleaching Sulphite	2.60	@ 2.75
News Sulphite	2.40	@ 2.65
Mitscherlich	3.00	@ 3.70
Kraft (Domestic)	2.70	@ 3.30
Soda Bleached	3.15	@ 3.50
Sulphate Screenings—		
Coarse	.75	@ .85
Refined	1.50	@ 1.65

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—		
New White, No. 1	11.00	@11.50
New White, No. 2.	8.00	@ 8.50
Silesias No. 1	7.25	@ 7.75
New Unbleached	10.50	@11.00
Washables	4.25	@ 4.75
Fancy	5.50	@ 6.00
Blue Overall	6.75	@ 7.25
New Blue Prints	5.25	@ 5.50
New Soft Blacks	5.25	@ 5.75
Mixed Khaki Cuttings	4.75	@ 5.25
Pink Corset Cuttings	8.00	@ 8.50
O. D. Khaki Cuttings	5.25	@ 5.75
Men's Corduroy	3.75	@ 4.25
New Mixed Blacks	3.50	@ 3.75

Old Rags

White, No. 1—		
Repacked	5.50	@ 6.00
Miscellaneous	4.50	@ 5.00
White, No. 2—		
Repacked	3.00	@ 3.50
Miscellaneous	2.50	@ 2.75
St. Soiled, White	2.00	@ 2.15
Thirds and Blues—		
Repacked	2.25	@ 2.50
Miscellaneous	1.75	@ 2.00
Black Stockings	3.25	@ 3.75
Roofing Rags—		
Cloth Strippings	1.70	@ 1.80
No. 1	1.70	@ 1.80
No. 2	1.55	@ 1.65
No. 3	1.30	@ 1.40
No. 4	1.25	@ 1.35
No. 5A	.95	@ 1.05

Foreign Rags

New Dark Cuttings	2.50	@ 3.00
New Mixed Cuttings	2.75	@ 3.25
New Light Silesias	7.00	@ 7.50
Light Flannelettes	7.50	@ 8.00
Unbleached Cottons	10.00	@11.00
New White Cuttings	10.50	@11.50
New Light Oxfords	7.00	@ 7.50
New Light Prints	5.50	@ 6.50
No. 1 White Linens	7.25	@ 8.00
No. 2 White Linens	5.50	@ 6.25
No. 3 White Linens	4.50	@ 5.00
No. 4 White Linens	3.00	@ 3.50
Old Extra Light Prints	2.75	@ 3.25
Ord. Light Prints	2.25	@ 2.50
Med. Light Prints	1.90	@ 2.10
Dutch Blue Cottons	2.25	@ 2.50
German Blue Linens	2.50	@ 2.75
German Blue Cottons	2.00	@ 2.25
Checks and Blues	1.75	@ 1.90
Lindsay Garments	1.85	@ 1.90
Dark Cottons	1.65	@ 1.75
Old Shopperies	1.55	@ 1.65
New Shopperies	1.50	@ 1.60
French Blues	2.10	@ 2.25

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—		
Foreign	1.60	@ 1.70
Domestic	1.70	@ 1.75
Wool Tares, light	1.60	@ 1.65
Wool Tares, heavy	1.60	@ 1.65
Bright Bagging	1.60	@ 1.65
Small Mixed Rope	1.25	@ 1.40
Manila Rope—		
Foreign	3.35	@ 3.65
Domestic	3.25	@ 4.00
New Burlap Cut	2.75	@ 3.00
Hessian Jute Threads—		
Foreign	3.50	@ 4.00
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, white, No. 1	3.25	@ 3.50
Hard, white, No. 2	2.40	@ 2.55
Soft, White, No. 1.	2.40	@ 2.55
White envelope cuttings	3.25	@ 3.50
Flat Stock—		
Stitchless	1.60	@ 1.70
Overissue Mag.	1.60	@ 1.70
Solid Flat Book	1.45	@ 1.50
Crumpled No. 1	1.05	@ 1.15
Solid Book Ledger	2.00	@ 2.10
Ledger Stock	1.60	@ 1.75
Manilas—		
New B. B. Chips	.65	@ .75
New Env. Cut	2.40	@ 2.60
New Cuttings	1.60	@ 1.85
Extra No. 1 old	1.25	@ 1.35
Print	.80	@ .85
Container	.72½	@ .77½
Bogus Wrapper	.75	@ .85
Old Kraft Machine Compressed bales	1.85	@ 1.95 (Made)
News—		
No. 1 White News	1.75	@ 1.80
Strictly Overissue	.85	@ .95
Strictly Folded	.75	@ .80
No. 1 Mixed Paper	.60	@ .65
Common Paper	.35	@ .40

Clay

400 tons daily

AMERICAN MADE FOR AMERICAN TRADE

H. T. BRAND
COATING CLAY
and
High Grade Filler Clay

A product developed as a result of 43 years experience in washing American Clays. Today being used in many of the largest paper mills.

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ESTABLISHED 1868

Water Tube Boilers Steam Superheaters
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Chain Grate Stokers Oil Burners
Refractories
Seamless Tube and Piping

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CINCINNATI	Traction Building
CLEVELAND	Guardian Building
DALLAS, TEXAS	Magnolia Building
DENVER	444 Seventeenth Street
DETROIT	Ford Building
HOUSTON, TEXAS	Electric Building
LOS ANGELES	Central Building
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PHOENIX, ARIZ.	Heard Building
PITTSBURGH	Farmers Deposit Bank Building
PORTLAND, ORE.	Failing Building
SALT LAKE CITY	Kearns Building
SAN FRANCISCO	Sheldon Building
SEATTLE	L. C. Smith Building
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TRIUNE

AND

MULTIPLE PLY DRYER FELTS

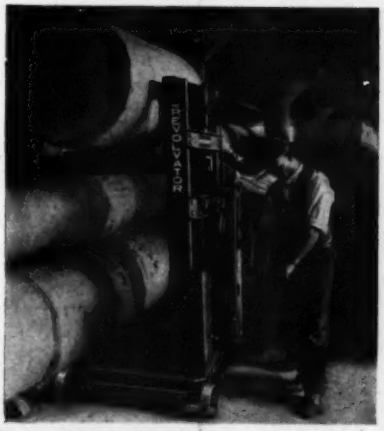
Serve every Felt Purpose in an efficient and satisfactory way.

ENGLISH or BAKER WOVEN

Made in three, four, five and six ply—60" to 214" wide.

FITCHBURG DUCK MILLS
FITCHBURG, MASS.

For 82 Years Makers of Fine Faced Felts for Papermakers



The Revolvator used for storing heavy rolls of paper in the plant of one of Chicago's largest printers.

Revolvators for Handling Paper

Handling paper in rolls, flat and boxed can be best accomplished with a Revolvator portable elevator. Many paper mills, warehouses, publishers and printers have found from experience that the Revolvator is the only device for such work. The Revolvator saves labor, does the work faster and safer and is far more economical than any other equipment. Send for descriptive bulletin P T and get the complete story —now.

Portable and Stationary Elevators Liftrucks Storage Racks

REVOLVATOR CO.
357 Garfield Avenue Jersey City, N. J.

Twines

(F. o. b. Mill)

Cotton—			
No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrapping, 3-6 Ply—			
No. 1	.21	@	.23
No. 2	.20	@	.22
Tube Rope—			
4-ply and larger	.18	@	.19
Fine Tube Yarn—			
3-ply and larger	.23	@	.27
4-ply	.24	@	.28
5-ply	.26	@	.30
Unfinished India—			
Basis	.16	@	.17
Paper Makers Twine			
Balls	.13	@	.15
Box Twine, 2-3 ply	.17	@	.19
Jute Rope	.21	@	.23
Ameri. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.18	@	.20
No. 2 Basis	.16	@	.18
Sisal Bath Yarn—			
No. 1	.16	@	.18
No. 2	.14	@	.16
Manila Rope	.24	@	.26

CHICAGO

All Rag Bond	.35	@	.41
No. 1 Rag Bond	.25	@	.35
No. 2 Rag Bond	.14	@	.25
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¾
No. 2 M. F. Book	.05¾	@	.06¾
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
News—Roll, mill	.03½	@	.04¼
News—Sheets, mill	.03¾	@	.04¾
No. 1 Manila	.04¼	@	.05¾
No. 1 Fibre	.04¾	@	.05¾
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.06¾	@	.06½
Southern Kraft	.03¾	@	.04
No. 2 Kraft	.04	@	.04¾
Wood Tag Boards	.04¼	@	.06½
Sulphite Screenings	.03	@	.03¾
Manila Tissue—			
24x36 Sheet	.07	@	.07¾
White Tissue—			
20x30 Sheet	.07¼	@	.07½
Boards, per ton—			
(Delivered Central Territory)			
Plain Chip	37.50	@	41.00
Solid News	47.50	@	—
Manila Lined Chip	55.00	@	—
Container Lined—			
(Delivered Central Territory)			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers

(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.80	@	2.90
White Env. Cuttings	2.90	@	3.00
No. 1 Soft Shavings	2.50	@	2.60
No. 1 Mixed	1.00	@	1.05
No. 2 Mixed	.90	@	1.00
Ledger & Writings	1.55	@	1.65
Solid Books	1.25	@	1.35
Blanks	1.70	@	1.80
Kraffs	1.90	@	2.00
New Kraft Cuts	2.25	@	2.35
Manila Envelope Cuttings	2.00	@	2.10
Ex. No. 1 Manila	1.55	@	1.65
Print Manila	.90	@	1.00
Folded News (overissue)	.65	@	.75
Old Newspapers—			
No. 1	.65	@	.75
No. 2	.60	@	.65
Mixed Papers—			
No. 1	.70	@	.80
Roofing Stocks—			
(F. o. b. Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper

(F. o. b. Mill)

Bonds	.07	@	.40
Ledgers	.11	@	.40
Writings—			
Superfine	.13	@	.18
Extra fine	—	@	.22
Fine	.20	@	.26½
Fine, No. 2	.16	@	.25
Fine, No. 3	.12	@	.20
Book, M. F.	.06	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.11	@	.16
Coated Lithograph	.09	@	.12
Labe	.09	@	.12
New	.03¾	@	.04
No. 1 Jute Manila	.08½	@	.09
Manila Sul., No. 1	.04½	@	.06
Manila No. 2	.04	@	.04½
No. 2 Kraft	.05	@	.05½
No. 1 Kraft	.06	@	.06½
Common Bogus	.02¾	@	—
Straw Board	52.50	@	75.00
News Board	45.00	@	—
Chip Board	42.50	@	—
Wood Pulp Board	4.50	@	5.00
(Carload Lots)			
Binder Boards—			
No. 1, per ton	80.00		
No. 2, per ton	75.00		
Carload lots	60.00	@	70.00
Tarred Felts—			
Regular	53.00	@	55.00
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.85	@	1.95
Best Tarred, 2-ply (per roll)	1.44	@	1.54
Best Tarred, 3-ply	1.93	@	2.08

Domestic Rags (New)

(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.10½	@	.11
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.07½	@	.08
Black Sil. a. soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable, No. 1	.04½	@	.05
Washable, No. 2	.03	@	.03½
Fancy	.05½	@	.06
Cottons—according to grades—			
Blue Overall	.07½	@	.08
New Black, soft	.04	@	.04½
Khaki Cuttings	.04	@	.04½
Corduroy	.04	@	.04½
New Canvas	.08	@	.08½
White No. 1—			
Repacked	4.75	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Twos and Blues	—	@	2.50
Thirds and Blues—			
Repacked	2.00	@	2.15
Miscellaneous	1.75	@	1.90
Roofing Stock—			
No. 1	1.75	@	1.85
No. 2	1.45	@	1.55
No. 3	1.05	@	1.10
No. 4	1.10	@	1.15

Foreign Rags

(F. o. b. Boston)

Dark Cottons	1.60	@	1.65
New No. 1 Shirt Cuttings	9.00	@	10.00
Dutch Blues	2.00	@	2.12½
Lace Curtains	5.50	@	—
New Checks & Blues	4.50	@	4.65
Old Fustians	1.90	@	—
New Blue	—	@	.04
New Black Soft	.05	@	.05¼
New Light Seconds	.02½	@	.03
New Dark Seconds	1.85	@	2.00
Khaki Cuttings—			
No. 1 O. D.	.05½	@	.05¾
No. 2 Mixed	.04½	@	.04¾
Corduroy	.03	@	.03½
New Canvas	.08½	@	.09
New Black Mixed	.03¾	@	.04½

Bagging

(F. o. b. Phila.)

Gunny No. 1—			
Foreign	1.65	@	1.80
Domestic	1.75	@	2.00
Manila Rope	3.50	@	4.00
Sisal Rope	1.50	@	—
Mixed Rope	1.10	@	1.25
Scrap Burlaps—			
No. 1	1.50	@	1.60
No. 2	1.15	@	1.25
Wool Tares, heavy	3.00	@	—
Mixed Strings	1.15	@	1.25
No. 1 New Light Burlap	2.50	@	2.75
New Burlap Cuttings	2.00	@	2.25

Old Papers

(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	3.20	@	3.25
No. 2 Hard White	2.75	@	3.00
No. 1 Soft White	2.50	@	2.60
No. 2 Soft White	1.90	@	2.00
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.60	@	1.65
Writing Paper	1.50	@	1.60
No. 1 Books, heavy	1.50	@	1.60
No. 2 Books, light	1.20	@	1.25
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.60
Print Manila	.95	@	1.00
Container Manila	.85	@	.90
Old Kraft	2.25	@	2.30
Common Paper	.55	@	.60
No. 1 Mixed Paper	.55	@	.60
Straw Board, Chip	.65	@	.75
Binders Board, Chip	.65	@	.75
Overissue News	.85	@	.90
Old Newspaper	.60	@	.65

Domestic Rags (Old)

White No. 1—			
Repacked	4.25	@	4.50
Miscellaneous	3.50	@	3.75
White, No. 2—			
Repacked	.02¾	@	.02¾
No. 2	1.40	@	1.50
No. 3 (Roofing)	1.15	@	1.25
No. 4	1.25	@	—
No. 5A	.85	@	.90
B	.80	@	.90
C	.70	@	.80
Thirds and Blues—			
Repacked	2.00	@	2.25
Miscellaneous	1.60	@	1.80
Black Stockings (Export)	3.90	@	4.25
Roofing Stock—			
Foreign No. 1	1.70	@	1.85

BOSTON

Paper

(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.15
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.07	@	.20
Superfines	.11	@	.31
News	.03½	@	.04
Book, Super	.06	@	.09
Book, M. F.	.05¾	@	.08½
Book, Coated	.08½	@	.20
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.05½	@	.06½
No. 2 Kraft	.04	@	.04¾
Common Bogus	.02	@	.02¾
Delivered New England points			
Straw Boards, rolls .009	52.50		
Straw Board in Sheets, basis 35s to 70s	54.50	@	55.00
Filled News Board	45.00		
Chip Board	42.50		
Single Manila Pulp Lined Board	52.50	@	57.50
Single White, Patent Coated Newsboard			
Bender	70.00	@	80.00
Wood Pulp Board	80.00	@	85.00
Binder Boards	70.00	@	75.00
(F. o. b. Mill)			
Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers

(F. o. b. Boston)

Shavings—			
No. 1 Hard White	3.25	@	3.75
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.50	@	2.60
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	2.35	@	2.45
No. 1 Books, Heavy	1.45	@	1.55
No. 1 Books, Light	—	@	1.45
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	1.20	@	1.25
White Blank News	1.65	@	1.70
Old Kraft	2.00	@	2.10
Print Manila	.80	@	.90
No. 1 Mixed Paper	—	@	.60
Overissue News	.70	@	.75
Old Newspapers	.70	@	.75
Box Board, Chip	65	@	—

Bagging

(Price f. o. b. Boston)

Gunny No. 1—			
Foreign	—	@	1.60
Manila Rope—			
Foreign	3.25	@	3.50
Domestic	3.25	@	3.50
Mixed Strings	.90	@	1.00
Scrap Burlaps	1.45	@	1.50
Scrap Sisal	1.25	@	1.50
Scrap Sisal for shredding	1.60	@	1.70
Wool Tares, heavy	—	@	1.50
New Burlap Cutting	1.90	@	2.00

Domestic Rags (New)

(Price f. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.09	@	.10
Silesias, No. 1	.06	@	.06½
New Unbleached	.09½	@	.10
Fancy	.04	@	.04½
Washable	.04	@	.04½
Cottons—According to grades			
Blue Overalls	.06	@	.06½
New Black, soft	.04	@	.04½
Khaki Cuttings	.04	@	.04½
Corduroy	.03	@	.03½
New Canvas	.08	@	.08½

Domestic Rags (Old)

(Price f. o. b. Boston)

Canvas	04½	@	—
White No. 1—			
Repacked	4.75	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	05
Miscellaneous	03½	@	04
Twos and Blues	—	@	2.50
Thirds and Blues—			
Repacked	2.00	@	2.15
Miscellaneous	1.75	@	1.90
Roofing Stock—			
No. 1	1.75	@	1.85
No. 2	1.45	@	1.55
No. 3	1.05	@	1.10
No. 4	1.10	@	1.15

Foreign Rags

(F. o. b. Boston)

Dark Cottons	1.60	@	1.65
New No. 1 Shirt Cuttings	9.00	@	10.00
Dutch Blues	2.00	@	2.12½
Lace Curtains	5.50	@	—
New Checks & Blues	4.50	@	4.65
Old Fustians	1.90	@	—

TORONTO

Paper

(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¾	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
News f. o. b. Mills—			
Rolls (carloads)	3.25	@	—
Sheets (carloads)	3.75	@	—
Sheets (2 tons or over)	4.00	@	—
Book—			
No. 1 M. F. (carloads)	7.50	@	—
No. 2 M. F. (carloads)	7.25	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.00	@	—
No. 2 S. C. (carloads)	7.75	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and Litho	14.50	@	—
No. 2 Coated and Litho	13.50	@	—
No. 3 Coated and Litho	12.75	@	—
Coated tinted	13	@	—
Wrapping—			
Rag Brown	4.95	@	—
White Wrap	5.25	@	—
"B" Manila	5.80	@	—
No. 1 Manila	6.65	@	—
Fibre	6 65	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.00	@	—

Pulp

(F. o. b. Mill)

Ground Wood	30.00	@	31.00
Sulphite easy bleaching	62.00	@	—
Sulphite news grade	62.00	@	—
Sulphite, bleached	75.00	@	—
Sulphate	65.00	@	—

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	2.85	@	—
White Blk. News	1.60	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.40	@	—
Light and Crumpled Book Stock	1.25	@	—
Ledgers and Writings	1.50	@	—
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	80	@	—
Strictly Folded	80	@	—
No. 1 Mixed Paper	.70	@	—

Domestic Rags

(Price to mills, f. o. b. Toronto)

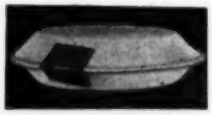
No. 1 White Shirt Cuttings	.11½	@	—
Fancy Shirt Cuttings	05½	@	—

Paprus Pie Plates
Sell faster

because they sell more pies! Because they hold the pie in the same shape as the tin plate in which it was baked. Because they are rigid, absorbent and keep bottom crusts flaky.

Build a bigger pie plate business with Paprus Pie Plates. Write for jobbers' terms.

Paprus Pie Plates used as covered container



PAPRUS
PIE PLATES

KEYES FIBRE COMPANY, INC.
General Sales Offices: GRAYBAR BLDG., NEW YORK
Factory: Waterville, Me. JOHN M. HART COMPANY, INC., *Manager of Sales*

Starch—

A SIMPLE change in the manufacturing process often results in a pronounced decrease in cost of production.

Paper Mills use Starch for sizing to produce better and stronger sheets with lower cost of manufacture.

Our SPECIAL PAPER brand for beater-sizing increases strength of sheet and gives improved finish.

Our FOX HEAD brand for top-sizing is more economical than all glue-size.

CORN PRODUCTS REFINING COMPANY
17 Battery Place, New York City

Statement of the ownership, management, circulation, etc., required by the Act of Congress of August 24, 1912, of PAPER TRADE JOURNAL published weekly at East Stroudsburg, Pa., for October 1, 1928.—State of New York, County of New York, ss.: Before me, a notary public in and for the State and county aforesaid, personally appeared George S. Macdonald, who, having been duly sworn to law, deposes and says that he is the publisher of the PAPER TRADE JOURNAL and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 4:1, Postal Laws and Regulations, printed on the reverse of this form, to wit: 1. That the names and addresses of the publisher, editor, managing editor and business managers are:—Puplisher, George S. Macdonald, 10 E. 39th St., New York, N. Y. Editor, H. J. Berger, 10 E. 39th St., New York, N.Y.; Managing Editor, H. J. Berger, 10 E. 39th St., New York, N. Y. Business Managers, George S. Macdonald, 10 E. 39th St., New York, N. Y. 2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.): Lockwood Trade Journal Co., 10 E. 39th St., New York, N. N.; Stockholders: George S. Macdonald, 10 E. 39th St., New York, N. Y. 3. That the known bondholders, mortgagees, and other security holders owing or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.): None. 4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him. 5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is.....(This information is required from daily publications only).

GEORGE S. MACDONALD, Signature of Publisher.

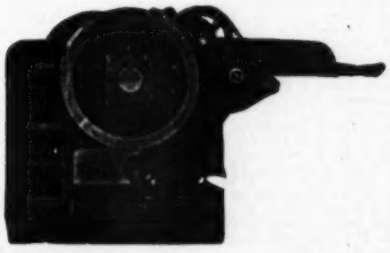
Sworn to and subscribed before me this 1st day of October, 1928.

(seal) MAX GROSS,
Notary Public, New York Co. No. 262
New York Co. Reg. No. 0-122

(My commission expires March 30, 1930.)

GIANT

RAG CUTTERS



TAYLOR, STILES & COMPANY
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Canadian Representatives
Waterous Engine Works Company, Ltd., Brantford, Ont., Can.

Sole Agents for Europe
R. J. Marx, 133-139 Finsbury Pavement, London, E. C.

Paper Mill Stocks and Bonds

Quoted by Taylor & White, 45 Wall street, New York City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS	BID	ASKED
Abitibi Power & Paper 5s, 1943	90	91
Abitibi Power & Paper 6s, serially to 1934	100	102
American Writing Paper 6s, 1947	81	87
Bastrop Pulp & Paper 6½s, 1940	103	105½
Bedford Pulp & Paper 6½s, 1942	97	100
Belgo-Canadian Paper 6s, 1943	100	103
British-Columbia Pulp & Paper 6s, 1950	89	92
Brown Paper Mills Serial 6s, 1941	97	100
Brown Company 5½s, 1946	98	101
Bryant Paper 6s, 1942	98	101½
Canadian Paper Board 7s, 19337	97	99½
Cape Breton Pulp & Paper 6s, 1932	103	...
Celotex Company 6s, 1929	95	99
Celotex Company 6½s, 1939	100	102
Celotex Company of Chicago, Debenture 6s, 1936	95	98
Central Paper Company Serial 6½s, 1942	86	89
Central Paper 7s, 1934	78	...
Champion Coated Paper Serial 6½s, 1934	100	...
Champion Coated Fibre Notes 6s, 1941	100	102
Champion Fibre Notes 6s, 1941	100	102
Champion Fibre Notes 8s, 1930	95	...
Champion Paper Corp. 6s, 1945	95	98
Container Corp. of America Debenture 6s, 1936, ex-warrants	101	104
Continental Paper Products 6½s, 1943	90	99
Cornell Wood Products 7½s, 1937	103	...
Crown Willamette 6s, 1951	101	102
Dells Paper & Pulp Serial 6s, 1938	95	98
Dixon Board Mills Serial 6s, 1942	80	...
Donnaconna Paper 5½s, 1948	93	...
Eastern Manufacturing Co. 7s, 1938	97	100
Escanaba Paper Serial 6s, 1939	98	100
Escanaba Paper 6½s, 1935	96	99
Filer Fibre Serial 7s, 1935	90	95
Fort Irange Paper 7s, 1942	101	...
Fort William Paper 6s, 1946	100	104
Fraser Company 6s, 1950	103	105
Hammermill Paper Serial 6s, 1939	100	...
Hawley Pulp & Lumber 6s, 1946	96	...
Hawthorne Paper Company 6s, 1937	80	...
Heberg Paper & Fibre 7s, 1937	94	97
Industrial Fibre Corp. Debenture 8s, 1933	100	...
International Paper 6s, 1955	102	103
International Paper 5s, 1947	98	100
Itasca Paper & Prairie River Power Serial 5½s, 1938	99½	...
Itasca Paper & Prairie River Power Serial 6s, 1938	99	...
Jessup & Moore First 6s, 1945	83	90
Kalamazoo Vegetable Parchment 6s, 1938	99	101
Lake Superior Paper 6s, 1941	105	108
Marathon Paper Mills Serial 5½s, 1942	99	101
Marinette & Menominee 7½s, 1936	103	105
Mead Pulp & Paper 5% Notes Serially, 1937	95	100
Mead Fibre 7s, 1937	97	101
Minnesota Ontario Paper Serial 6s, 1945	97½	100
Murray Bay Paper Serial 6½s, 1947	102	105
Munissing Paper Serial 6s, 1936	98	...
Nekoosa Edwards Paper 6s, 1928-42	96	...
Ontario Pulp & Paper 6s, 1931	108½	110½
Oreno Pulp & Paper 6s, 1943	99	...
Orono Pulp & Paper 5s, 1941	96½	...
Oswego Falls Corp. 6s, 1941	99	102
Parker-Young Company 6½s, 1944	98	100
Paterson Parchment Paper 6s, 1938	101	103
Penobscot Chemical Fibre 6s, 1942	102	105
Port Alfred Pulp & Paper 5½s, 1947	98	100
Price Brothers 6s, 1943	105	...
Provincial Paper 5½s, 1947	98½	...
Queen City Paper 7s, 1933	98	...
River Raisin Paper 6s, 1936	98	100
Riordan Pulp & Paper 6s, 1942	102	104
Rolland Paper 6s, 1937	99	101
St. Croix Paper Serial 5s, 1937	99	...
St. Helen Pulp & Paper 6½s, 1931	99	102
St. Maurice Valley Corp. 6s, 1945	101	104
St. Maurice Valley Corp. 5½s, 1947	98½	100½
St. Regis Paper of Canada 6s, 1931	100	101½
St. Regis Paper of Canada 6½s, 1934	100	102
Smith (Howard) Paper Mills 7s, 1941	104	106
Spanish River Pulp & Paper 6s, 1931	108	110
Stevens-Thompson Paper 6s, 1942	94	96
Taggart Brothers 6s, 1944	95	100
Tait Paper & Color Industries 6s, 1934	88	92
Ticonderoga Pulp & Paper 5s, 1930	94	...
Ticonderoga Pulp & Paper 6s, 1940	100	102
Tomahawk Kraft Paper 6s, 1938	98	...
Tomahawk Pulp Paper 7s, 1932	99	...
Tonawanda Paper 5½s, Series 1941	99	102
Union Bag & Paper Power 6s, 1932	98	100
United Wall Paper Factories 6s, 1947	96	99
Warren (S. D.) Company 6s, 1945	103	105
Watab Paper 6½s, 1942	101	103½
Waterway Paper Products 6s, 1931	100	101½
Wayagamack Pulp & Paper 6s, 1951	103	105
Westfield River Paper Serial 7s, 1943	89	93
Whitmer-Parson Pulp & Lumber 8s, 1938	20	25
Whitaker Paper 7s, 1942	108	110

STOCKS	BID	ASKED
American Box Board, Pfd.	9¼	10¼
American Box Board, Com.	9¼	10¼
Am. Tissue Mills, 7% Pfd.	90	93
British Columbia P. & P. Pfd.	65	75
Brompton Pulp & Paper, 8% Pfd.	100	...
Champion Fibre, 7% Pfd.	108	110
Diem & Wing, 7% Pfd.	92	97
Eastern Mfg. Co. 1st Pfd.	55	...
Great Northern Paper, Com.	75	78
Hammermill Paper, new 6% Pfd.	100	...
Hinde & Dauch, Com.	125	None Off.
Hinde & Dauch, 6% Pfd.	102	None Off.
Holyoke Card & Paper	160	None Off.
Marathon Paper Mills, Com.	150	...
Mengel Co., Pfd.	102	104
Midwest Box Co., 8% Pfd.	98	102
Midwest Box Co., 6% Pfd.	95	99
Louis De Jonge Co., 7% Pfd.	94	97
Oxford Papers, Com.	195	...
Oxford Paper Co., Pfd.	108	111
Penobscot Chemical Fibre, Com.	80	...
Richardson Co., Com.	170	...
Rubberoid	95	101
Sabin Robbins Paper Co., 8% Pfd.	105	110
St. Croix Paper	155	...
St. Regis Paper Co., 7% Cum. Pfd.	105	108
Westfield River Paper Co., 1st Pfd.	Wanted	None Off.
West Virginia Pulp and Paper Company	55	57
West Virginia Pulp and Paper, Pfd.	100	103
Whittaker Paper, 7% Cum. Pfd.	105	None Off.

NATIONAL SAFETY CONGRESS MEETS

(*Continued from page 26*)

On Wednesday morning "The Importance of Lighting and Its Relation to Safety" was discussed by W. H. Blackwell, general lighting representative of the Public Service Corporation of New Jersey, Newark, N. J.

P. H. Hourigan, M.D., plant surgeon of the Larkin Company, Buffalo, explained in a comprehensive manner "How to Administer First Aid in Both the Small and the Large Plant."

F. L. Irvin Addresses Gathering

Following luncheon at the Roof Garden of the Waldorf-Astoria, F. L. Irvin, supervisor of employment of the St. Croix Paper Company, addressed the gathering on "The Influences and Results of Safety in Our Plant," giving a general idea of the influence and results of the safety work of his company. He declared the St. Croix Paper Company has realized its duty to provide safe working conditions and has spent considerable money in safeguarding "danger spots." Consequently, there has arisen a direct relationship between the management and the employees to make the mill a safe place in which to work. Most of the unsafe places have been corrected as a result of suggestions submitted by the workmen in the monthly Safety Suggestion Contest. Interest is maintained because the management acts promptly to eliminate, where it can, the hazards that are reported. The workmen see the tangible results of their own ideas.

Safety Council Contest Winners

Homer E. Niesz, president of the National Safety Council, presented trophies to the winners of the Annual Safety Council Contest for 1928. The number of mills entering this contest was 124. The winners were as follows:

Group A, consisting of mills employing over five hundred workers: The Champion Coated Paper Company, Hamilton, Ohio.

Group B, consisting of mills employing between two hundred and five hundred workers: St. Croix Paper Company, Woodland, Me.

Group C, consisting of mills employing two workers or less: Niagara Wall Paper Company, Niagara Falls, N. Y.

Edward B. Fritz, publisher of the *Paper Industry*, presented a special trophy to the St. Croix Paper Company, Woodland, Me.

Officers Elected for Coming Year

The following officers were elected for the ensuing year:

Chairman, Kenneth L. Faist, safety director, Champion Coated Paper Co., Hamilton, Ohio.

Vice-chairman for Canada, A. P. Costigane, secretary and engineer, Ontario Pulp and Paper Maker's Safety Association, Toronto, Ont.

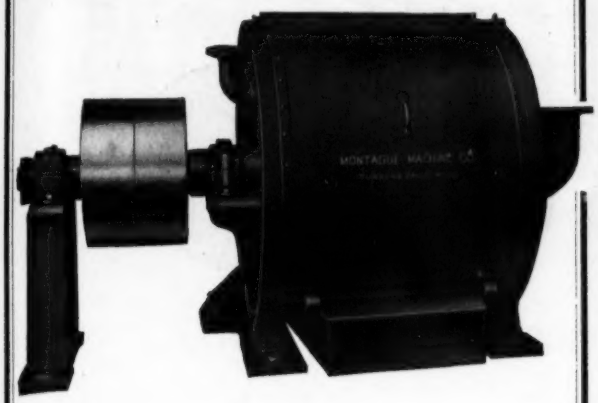
Vice-chairman for South, G. W. Phillips, superintendent of safety, The Champion Fibre Co., Canton, N. C.

Vice-chairman for Middle-West, M. G. Hoyman, superintendent of service, Kimberly-Clark Co., Neenah, Wis.

Vice-chairman for East, N. F. Bartlett, traffic manager, Hollingsworth & Vose Co., Boston, Mass.

Vice-chairman for Paper Box Manufacturers, H. C. Sackett, Alton Box Board & Paper Co., Alton, Ill.

Secretary, D. D. Thirkield, Sorg-Oglesby-Smith Paper Co., Middletown, Ohio.



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5—Low in maintenance cost.
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8—Quality of stock high and uniform.
9—Low percentage of rejections.
10—Rejections well washed.

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Montague Machine Co.

Turners Falls, Mass.

PAPER TRADE JOURNAL

ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-SEVENTH YEAR

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